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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

AUGUST, 1891.

No. 1

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to

ARCHITECTURE, CONSTRUCTION, DECORATION AND FURNISHING IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photogravures), 75c. Intermediate number, 10c. Advance payment required.

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Department of Fine Arts, Architectural Exhibit.

Mr. Halsey C. Ives, chief of the department of fine arts of the World's Columbian Exposition, has taken up the matter of the best possible expression of American architecture as a fine art, and has also begun correspondence with European architectural societies regarding adequate exhibits of recent architectural progress. A special effort will be made to secure from abroad as large collections as possible of reproductions from monumental decorations, which will probably remain in this country, and give a rare opportunity for comparison. "Building and construction" will not be included in the Department of Fine Arts exhibit, this belonging to the class of "civil engineering," as constructive architecture, in the Department of Liberal Arts. These subjects, which belong to Class 839 in Group 148, Department L, Liberal Arts, include the following:

Plans of public buildings for special purposes; large and small dwelling houses.

Dwellings and specifications for foundations, walls, partitions, floors, roofs and stairways.

Estimates of amount and cost of material.

Designs and models of special contrivances for safety, comfort and convenience in the manipulation of elevators, doors, windows, etc.

Working plans for the mason, carpenter and painter — Designs and models of bonds, arches, coping, vaulting, etc.; plastering and construction of partitions; painting and glazing.

Plans of appliances for hoisting, handling and delivering.

Building materials to artisans — Scaffolding and ladders; special scaffolding for handling great weights; portable cranes and power elevators.

Illustrations of the strength of materials.

Plans and sections of special architectural forms — Metallic floor-beams and girders; hollow bricks and other architectural pottery for heating and ventilation; metallic cornice and conduits; shingles and sheathing; glass roofs, floors and accessories; architectural hardware.

Methods of combining materials.

Protection of foundations, areas and walls against water.

Working plans for paving and draining.

According to the rules and regulations issued by the Department of Fine Arts, the subjects exhibited in this department will include sculpture, fresco painting on walls and antique or modern carvings, and architects everywhere should be interested in making this department notable, while those in America should see that the exhibit of American architecture bears comparison favorably with those made by other countries. In general, all works to be admitted to the Department of Fine Arts must be originals, with the exception that casts from original works by modern artists are placed in the same class with original figures and groups in marble. There will be three sections in the department — an American section; a section for foreign countries that are represented by a commission; a section comprising private collections and the works of artists from countries not represented by a commission, and all works must be examined by an official jury before they can be admitted.

Five per cent Universal for Architects' Services.

There is probably no custom so firmly established by universal recognition as the general charge of five per cent upon the cost of architectural work. It has spread throughout the world, and whenever architects have met together and agreed upon rules of practice they have laid down five per cent as a basis of compensation for their services. It is remarkable that this is so, because there are few rules that will apply to the customs of every country; but in the absence of statute which can be changed by the few in legislative power, the many have seen the advantage of system and of precedent and given to the world a new law

that shows by its universal recognition to be as firmly established as the *meum* and *tuum* of common law. Its history is not hard to trace. First adopted by the Royal Institute of British Architects, it was adopted with other features of that association by the American Institute, and as the architects in Australia and other British colonies became organized, they drew their schedule of professional charges upon the lines of the parent organization. The architects of France, Germany, Italy and other European nations also took this schedule for a basis, and so unchanging it stands a law, established upon the foundation of all law — custom. But the details have changed to meet new conditions and requirements, those societies latest organized having been most active in perfecting the details of the schedule. That of the Western Association of Architects had its influence upon that of the American Institute, from which it was originally copied. The new societies in Australia have a more complete schedule than that of England or this country, and Germany and Belgium have a more elaborate scale still. The tendency is to make five per cent a minimum rather than implied maximum charge, and in the vast difference of labor involved between the cost of designing of a factory and that of a private residence, it is but right that some elasticity in the schedule be necessary. This is, however, more imaginary than real, for who can say that the artistic ability to design a piece of decorative work should be worthy of more compensation than the constructive skill demanded in the planning of a factory? If architects would make it a rule to present a copy of their association schedule to the client when first consulted regarding their services, they would do much to protect themselves against an unappreciative public, and there would be less complaint of inadequate compensation.

Accurate Definition of the term "Bay Window." A case came up in the Chicago courts recently which necessitated expert testimony in the matter of a definition of the term "Bay Window." A definition was formulated and agreed to by some of the most eminent members of the architectural profession, and this definition was the one accepted by the court. As it will be of interest to the profession generally, we give it: "Bay window, an adjunct of any shape that is designed to be an enlargement to a room, and which projects beyond the exterior face of a main wall of a building, and does not extend above the main cornice. It may have its foundation in the ground, or be supported on corbels or otherwise." It is probable that this was not intended as a "dictionary definition," but was made with special reference to this case, but that it may not be regarded as final it would seem well to comment upon it. It is a fair definition of bay, though not in the generally accepted architectural signification of that term, and it is equally applicable to niche, or to alcove, but it does not define "bay window" at all. Would not "glazed" adjunct shed a little light on the subject? Even thus modified the definition would not cover bay window alone, but would include a bay with a window in it, which, we take it, is not necessarily a bay window. A bay window should be a more than one-sided affair. It would seem well, also, to remove the definition beyond the limits of a special case by striking out the adjective "main," which, applied to a building with a broken ground plan, would cause some confusion. Without impeaching the astuteness of the court, or questioning

the wisdom of the eminent professional gentlemen, we would submit this revised definition for their consideration: Bay window, an adjunct to a building, that is designed to be an enlargement to a room, which is of any shape, which is glazed on a curve or on two or more sides continuously, which projects beyond the wall to which it is attached, and which does not extend above the cornice or coping of that wall. It may have its foundation in the ground, or be supported on corbels or otherwise.

State and Foreign Buildings. The sites for state and foreign buildings at the World's Columbian Exposition are grouped in what is known as the improved portion of Jackson park, located north of the main buildings. Upon these sites the several states of the Union and foreign governments will erect buildings either independently or in combination as they may choose. The local commissioners appointed by the state government will select an architect, and he will design and furnish working drawings for a building. Upon the approval of the chief of construction, both upon design and construction, they can be erected upon the allotted site. The general disposition seems to be that a local architect should be selected, and the construction be composed of local materials, and, as far as possible, demonstrate the building material resources of the state to which the building belongs.

Slight Stoppage of World's Fair Work. A notification to contractors upon World's Fair buildings issued on August 11 by the chief of construction, occurring simultaneously with the resignation of chief of engineers Gotlieb, caused something of a sensation, although hardly worthy of note except from the publicity given to the incident by the daily press. Mistakes having been found in the strain sheets upon some of the buildings it was thought best to stop work until all could be checked off, and in two cases, the Mines and Mining and the Women's buildings, which were furthest advanced in construction, some of the work had to be reconstructed. The Construction Department has in its employ some of the best architects, engineers and superintendents in the country, care having been taken from the first to fill every important position with an expert, and this stoppage of work only evidences the extreme care with which the construction is carried on by the Chief of Construction, the incident being of so ordinary a nature as to have passed unnoticed had it occurred upon any work of less sensational character than that connected with the great Exposition of 1893.

Slow Burning versus Fireproof Construction. In endeavoring to show by description and photographs, as accurately as possible, the effect of fire upon the different methods of both slow burning and actual fireproof construction, as demonstrated by the fire in the old Lumber Exchange building at St. Paul, with which considerable space is occupied in this number, we hope to give to architects an unanswerable argument in discussions with clients regarding the practical advantages of fireproofing. While the covering of wooden joists with fireproof material may render them safe in a majority of cases, the result narrated shows how useless the fireproofing is when any break occurs in the construction, where wood joists are used, and how absolutely safe from fire the building is when the approved methods of fireproof construction are employed.

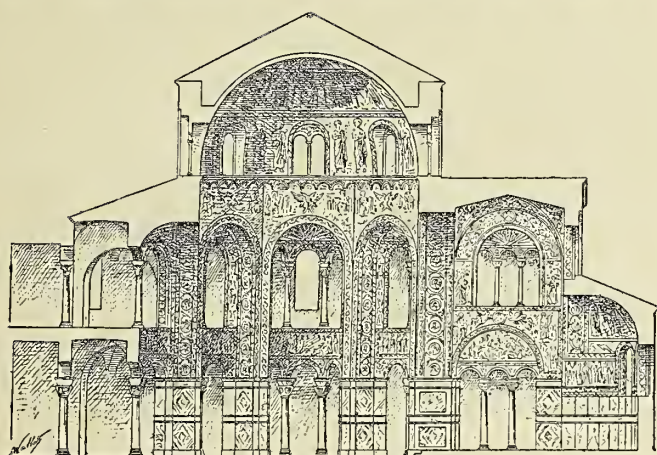
Architecture and the Allied Arts.

BY BARR FERREE, LECTURER IN THE SCHOOL OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA.

PART III.

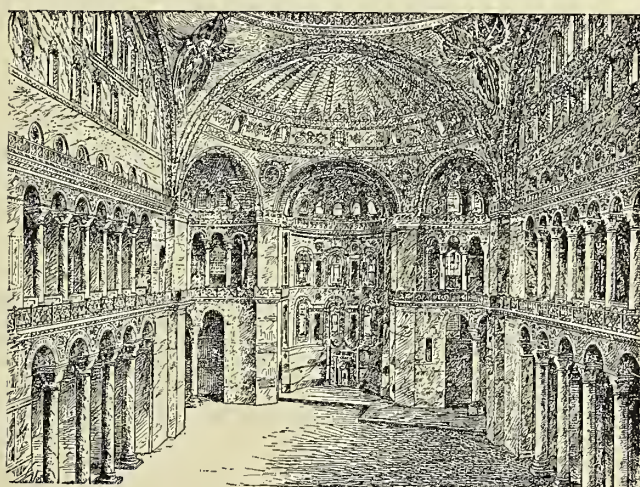
EARLY CHRISTIAN, BYZANTINE, MOHAMMEDAN.

THE transfer of the Roman capital from Rome to Byzantium by Constantine was attended with more momentous consequences to art than the imperial reformer dreamed of. At this time art in Italy had reached a point on the downward path that required more energy to improve it than the worn-out luxury of the great capital could concentrate on one cause, even if it related to the existence of the empire, much less in art, which was now degraded to a



SECTION, CHURCH OF S. VITALE AT RAVENNA.

plaything for the rich and powerful. Roman art drew its best inspiration from the Greek, and when the traditions of Greek art died out there was no native genius to develop it. The last years of Roman art, are, therefore, a servile following of the Greek. Little hope for improvement could have been entertained at Rome, but at Byzantium a new direction was given to the development of art. For a time it seemed that a fresh lease of life had been gained. The emperors were desirous of perpetuating their names and memories by building a new and magnificent city. This laudable desire and the absolute necessity for the erection of palaces and other public buildings were the chief factors in bringing about a new condition of things. In the East the Romans came in contact with a people having methods of



INTERIOR, CHURCH OF S. SOPHIA, AT CONSTANTINOPLE.

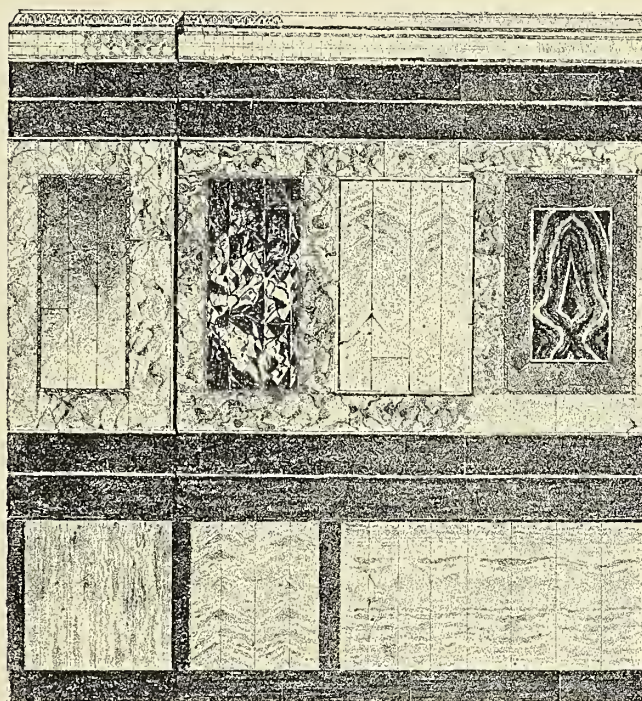
building different from their own, and they speedily evolved a style quite unlike its Roman predecessor.

The growth of Christianity and its adoption as the state religion had an important effect on the development of art. At first, a mere change of name sufficed to transform a heathen edifice into a Christian one. In process of time, this was not enough, and structures Christian from their foundation were built. The desire to erect something that was totally different from the temple hastened the development of the new style. Paintings of the gods were, by a simple change of name, transferred into representations of the sacred personages of Scripture. With the spread of the new religion, however, these heathen symbols fell into disuse, and quantities of them

were destroyed, to the great injury to art and the regret of a more enlightened posterity, for no other reason than their association with the evil things of past times.

The early Christians were not a people under whom art, either in the form of architecture, painting or sculpture, could be expected to flourish. Originating among the very lowest people of the empire, they were too much occupied with gaining a bare existence to have the means of erecting structures of architectural pretensions. However insignificant may have been the churches and places of worship of the early Christians, the piety of the Christian emperors led them to donate large sums and grant extensive revenues to the Church. Thus, notwithstanding the generally retarded condition of architecture, the early Christian period produced some churches of great magnificence and very considerable proportions.

Byzantine art set the model for Christian expression in architecture as well as in painting and sculpture. Christian ideas in art first gained visible form in the East, and while at one time it seemed as though a progressive form of architecture had been evolved, the conditions of the Eastern empire, which lacked the vigor which once made Rome great, were such that art in all forms became stagnated, and instead of any active advance being made it became bound by rules that almost completely stifled individual life and feeling. Of the historic forms of architecture the Byzantine style employs the

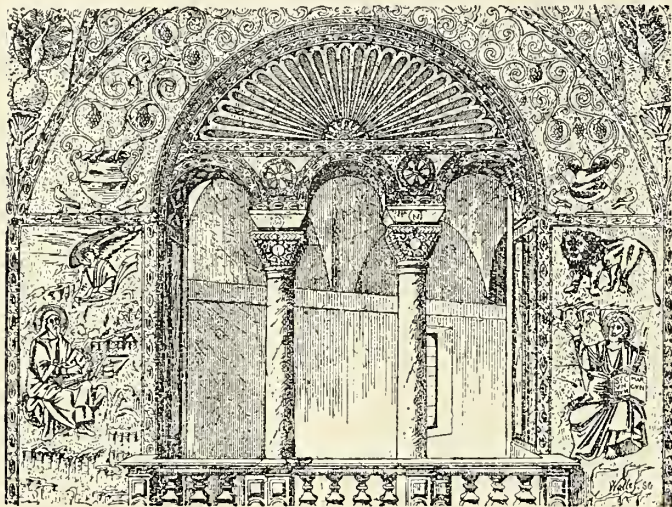


MARBLE PANELED DECORATION, CONSTANTINOPLE.

allied arts to the least extent in so far as organic action is concerned. The exteriors were almost totally devoid of any architectural or ornamental features. They were simply coverings to the interior without any thought of rendering them architecturally impressive. Yet the plain solid exteriors were not altogether deficient in merit. The church of S. Sophia, for example, though one of the ugliest structures imaginable without, has a certain dignity, and actually appears larger than it is. This quality, however, is so negatively artistic, as scarcely to call for commendation.

Though the Byzantine builders seemed absolutely regardless of the external appearance of their churches, they decorated them within with a characteristic and superb decoration. Mosaic, which the Romans had used chiefly for floors, became in their hands a new and brilliant art with which they produced results of almost unsurpassed magnificence. Much of this early work has been lost, and very considerable of what remains has been restored to too great an extent to enable us to judge actually of its original condition. The church of S. Vitale at Ravenna, and S. Sophia at Constantinople, however, fortunately enable us so gain an accurate idea of the great splendor with which the Byzantine church was decorated. The walls are lined with slabs of marble of various colors, arranged to form panelings by their color and veining, without chiseled ornament. In the upper part of the walls scenes in mosaics are introduced, and the spandrels, arches and other constructive features are decorated with ornaments in the same art. Comparatively speaking, there is little carved ornament. The columns are of rare marble, taken, in the earlier churches,

from older edifices; the capitals, which are almost the single instance of carved ornament, are in low relief, the decoration being incised and closely following the outline of the bell. Similar ornament,



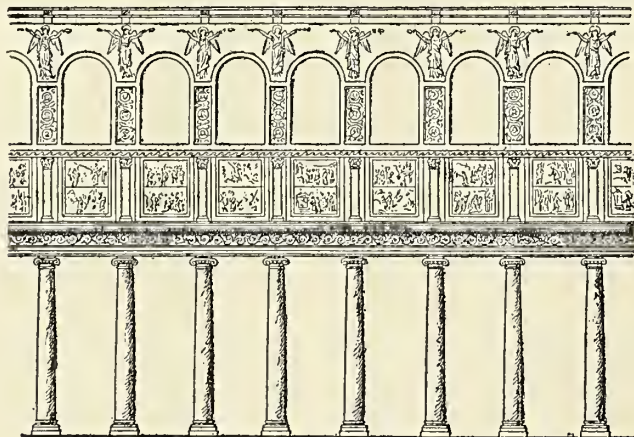
DECORATION, CHURCH OF S. VITALE, AT RAVENNA.

which gives scarcely any relief to the walls, and indeed from a distance seems scarcely cut at all, is sometimes used around the arches and in the cornices.

A Byzantine structure, therefore, presents none of that organic union of all the arts which is to be noted in many other styles. The mosaic decoration was gorgeous, and the gold backgrounds on which the scenes were depicted gave in an unequaled brilliancy, but the ornamentation is distinct from the architecture, and the architecture distinct from the ornamentation. These two parts do not help each other, yet both form the Byzantine style. Byzantine art produced many beautiful pieces of individual carving, yet as a whole the art was undeveloped. Sculpture was looked upon as an especially heathen art, and relatively few statues were produced in this style of art. Its chief glory were the mosaics, and few systems of decoration have been devised so effective, so rich and so satisfying to the eye.

In Italy the Byzantine style is seen to best advantage in the churches of Ravenna, but even in those buildings in which only traces of it are to be found, the mosaics form the chief decoration. The Roman basilicas are ornamented in this manner. The church of S. Appollinare at Ravenna is an excellent illustration of early Christian architecture, with its columns and capitals borrowed from Roman edifices, and its superb decorations of mosaics.

The Church of S. Mark, at Venice, though dating from the tenth and eleventh centuries, is a superb illustration of the Byzantine style. Notwithstanding the various kinds of decoration employed on it, owing to the length of time consumed in its building, it is essentially Byzantine in character. It is interesting to compare the interior of this church with that of S. Front, at Périgueux, which is built on much the same plan as S. Mark's, but is totally devoid of any



SECTION, CHURCH OF S. MARIA MAGGIORE, AT ROME.

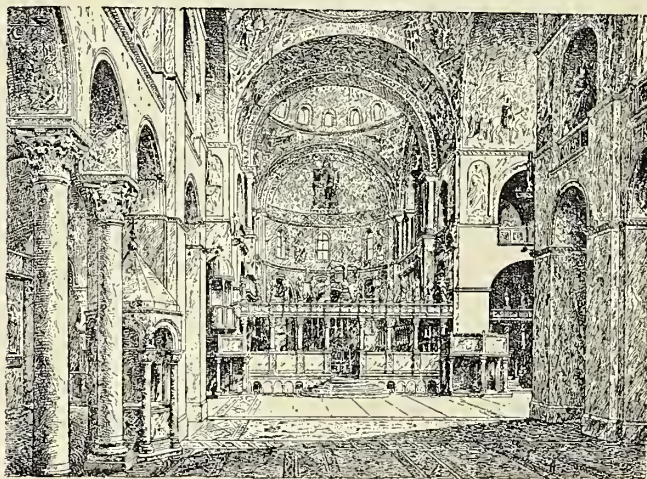
sort of decoration. These two churches—and the French one is undoubtedly modeled after that at Venice—are very good illustrations of the effect decoration has upon style, and the important part it takes in giving character to the edifice.

Byzantine art includes so many elements that afterward received peculiarly Mohammedan development, that while it is interrupting

the historical sequence of this narrative to allude to it here, the present offers a convenient opportunity for glancing at some of its more important features. Mohammedan art is the natural successor to the Byzantine, and resembles early Christian in the respect that the religious traditions of the people were adverse to the making of representations of natural objects, either animal, vegetable or human. The Mohammedans speedily invented a style of decorating their buildings and relieving them of the plainness that must otherwise have distinguished them. This was accomplished by a system consisting in the application of geometrical designs of infinite variety and grace, a method which soon met with universal application, and became one of the characteristic features of Mohammedan art.

Mohammedan decoration covers the walls of the buildings like tapestries or embroideries and without architectural arrangement or connection. It has been suggested, and with every likelihood of plausibility, that it is a survivor of the embroidery with which the nomadic Arab women were accustomed to ornament the interior of their tents. It is an interesting fact, whatever be its origin, that this system of decoration is very general throughout the East. The three great civilizations that originated between the Nile and the Euphrates—the Egyptian, the Assyrian and the Mohammedan—were all characterized by this embroidery-like decoration. The Mohammedans never got beyond the unconstructive character of their ornament; the stalactitic system of pendentives adopted in their later work is totally independent of the construction, and performs no constructive duty.

There is no sculpture in Mohammedan architecture, but the decorative system is so elaborate and beautiful that the need of it is not



INTERIOR, CHURCH OF S. MARK'S, AT VENICE.

apparent. Much of this decoration is in the form of tiles and incised lines, but in no sense did it approach sculpture. The union between architecture and an ornamental decoration was never closer than in Mohammedan art. The outsides of their buildings are perfectly plain, and are frequently left in a rough state that is almost repulsive. This was the usual custom in all Mohammedan private buildings, though there are some exceptions in the public buildings, official structures, mosques, etc. It was so universal that doubtless the canons of propriety among these people refused to recognize any other system, and violations of it would have been looked upon as trespassing upon good taste. It had the effect of rendering the cities and towns exceedingly monotonous and dull, and if one has seen one Mohammedan town one has seen them all. The variety that is exhibited by every western town of even ordinary importance is entirely wanting.

While outwardly the large part of Mohammedan structures were thoroughly devoid of interest, internally they made up for any lack of exterior ornamentation, and by the brilliancy of the colors, the invention of the designs, the delicacy and grace of the combination, obtained results that have seldom been surpassed in the history of art. Limited as they were by their religious faith to geometrical designs, which, however, they gradually extended by the application of conventionalism to some natural forms, chiefly leaves and flowers, their wonderful inventive genius thus forced into one direction produced works of such infinite variety that one scarcely realizes that there is any limitation at all. It is a remarkable fact, as showing how rapidly art may develop when it is confined to one direction, that the Moslems had a complete and elaborate art before the Christians had

formed one of equal advancement. Unfortunately, the direction in which the Mohammedans worked was incapable of infinite development, and the older buildings exhibit more perfect forms and a more correct application of them than do the later ones. The collapse of Mohammedan art naturally followed the loss of power and dominion by the followers of the Prophet, and it could not be expected that with the decline of the state any genuine art could be maintained.

It is not possible to describe here in detail the various schools of Mohammedan art, which were almost as numerous and varied as the schools of Gothic art, but the influence of the decoration on the development of the most marked forms should not be overlooked. In the early Mohammedan buildings of Egypt, the architecture has a grandeur and solemnity that comes only from the judicious use of ornament. In other schools, the decorative elements were more largely used, but their development was at the expense of the architecture. This was especially the case with Moorish architecture in Spain. In the Mosque of Cordova, the architecture has a decorative tendency that is quite different from the early Egyptian school, and in the Alhambra it is almost lost in the decoration. Though of surpassing beauty, the architecture of the Alhambra is too highly decorated, and the ornamentation, instead of holding a subordinate part, forms the entire structure itself. Nowhere else in Europe is there to be found such a blaze of color in a building, nowhere else has such a harmonious and wonderful system of decoration been carried to successful completion, and it is an object lesson in the application of design to surfaces; in the correct and harmonious coloring of walls, and in the erection of a building designed for the warm and voluptuous climate of the South it is without a rival.

With all its grace and beauty, however, the Alhambra is a monument to the fatal defect of Mohammedan architecture. Unlike other great builders, the Moslems did not build for all time. Many of their earlier structures, erected before the cultivation of art was carried to the excess of later periods, exhibit considerable strength and solidity; but in later times, when the fondness for lighter things and the love for beauty and delicacy had become a passion, a false step was made

predilection for the use of plastic substances may have come down from the ancient methods in vogue in Asia Minor and Assyria. Assyrian architecture was wholly one of clay, and, like the Mohammedan, called for constant repairs which, if omitted for only a short time, resulted in the rapid ruin of the structure. The Mohammedans did not hesitate to use clay and plaster as the chief vehicle for ornamentation, and as a result a large part of their art has been lost. Perishable as the material is, it is doubtful if Mohammedan art would have reached such glorious results had it not been used.

Plain, ugly bare walls was the ordinary Mohammedan manner of treating the exteriors of buildings. There were, however, some exceptions, and many Persian palaces and mosques have an external decoration of tiles. In India, where Mohammedan art came into contact with a developed and characteristic native art, an ornamented system seems to have prevailed, which, while largely used, was not universal. Many of the greatest monuments of Mohammedan India are as richly decorated and colored without as within. These are chiefly government works or state buildings, or those of a monumental character, which could very well have been made exceptions to the rule that no citizen would undertake to violate. The Mohammedan architecture of India has a charm which arises from its combination with the native art. Buildings like the Taj Mehul show what exquisite structures and delicate forms it was capable of. All of its beauty, however, is dependent upon the decoration, the color, the tiles, the mosaic, the painted ornament, for the total effect. It is impossible to conceive of the Taj denuded of its delicate decoration, and graceful as are its architectural form and lines, it would never have excited the admiration it has had if it been built in solid granite.

Mohammedan architecture, whether in the forms of India or of Spain, of Egypt, of Persia, or of Syria, is essentially an architecture of the South. Its forms and methods, its delicacy and refinement, are not applicable to cold climates, and any attempt to transfer them to our comfortless latitude must be attended with failure. But though we cannot reproduce the buildings, we can study the decorations, and absorb as well as our cold northern nature will permit, the grace and beauty they exhibit. Whatever be the defects of Mohammedan architecture from a structural standpoint, it produced wonderful results by the use of color and ornament, and to these elements it owes many of its most striking characteristics.

In some exceptional cases the Mohammedans made use of both sculpture and painting, and produced representation not only of animals but of human beings. Much of this was done by Christian artists, and is to be noted in the period of the decadence of Mohammedan art. At no time did they ever form an integral part of a Mohammedan structure, but their use was not unknown.

(To be continued.)

Notes from our French Exchanges.*

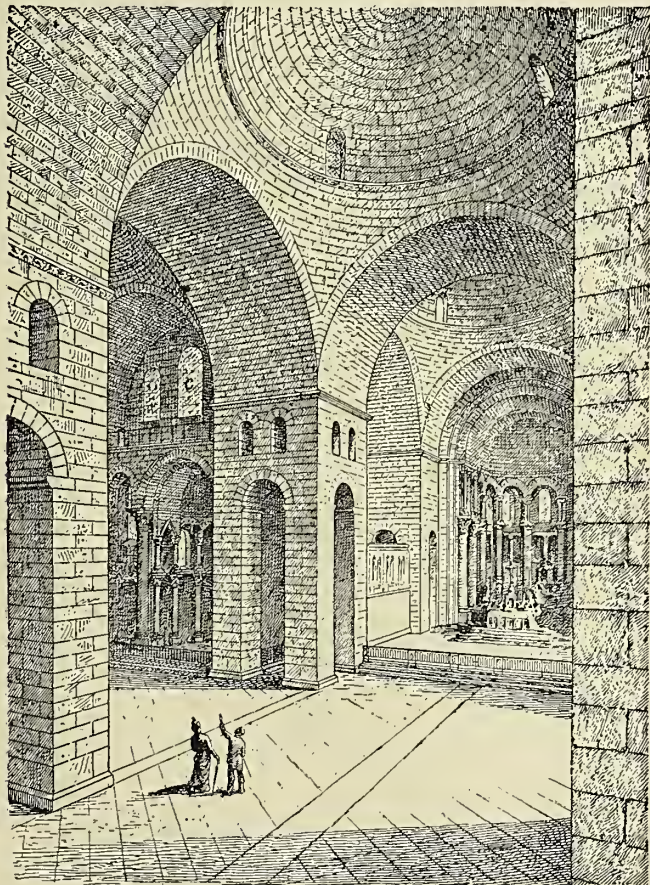
WALL PAPERS.

IN most cases a wall paper, according to *La Semaine des Constructeurs*, should form a background without so striking a decoration as to particularly attract the attention, serving to set off the furniture, hangings and other objects in a room without in itself making a pretense of being a special decoration. Velvet papers are generally those that are most effective in a parlor, but they have one dangerous feature of which we shall speak presently. Small flower designs, in little clusters, branches, etc., are suitable for bedrooms, but on condition that they do not fatigue the eye, in which case they cause headaches and even sometimes fevers to weak persons. For a study the paper should be very calm and simple, preferably of a blue or greenish tone, to save the eyesight as much as possible.

In our opinion it is a great mistake to cover the walls of a dining room, as has been the custom for some years, with a paper having patterns of leaves and branches in dark and somber colors. Was this barbarous fashion set by some miserly housewife, who thus hoped to have her guests eat less? In this room everything, as well as good cooking and good wine, should season and accentuate the pleasure of living. Brillat-Savarin used to say that Amphitruon ought not only to feed his guests, but should make them happy by every means in his power.

For my part I prefer for this room a bright, gay kind of paper, and I even regret the loss of the old-fashioned landscape wall paper with distant views upon it, which used to add pleasure to a meal in my boyhood even if the colors were brighter than in nature. But in general, the dark tints and the "dim religious light" should be everywhere proscribed. Such rooms are only suitable for persons whose

*Translated and arranged by W. A. Otis, architect.



INTERIOR, CHURCH OF S. FRONT, PERIGUEUX, FRANCE.

in the use of plaster and stucco on which the designs were executed and which became the vehicle for the application of art forms. When the Moslems had intrenched themselves in one locality and had formed a strong, powerful and rich government, the use of these frail materials was not particularly improper. Funds for repairs were in abundance and they had the great merit of permitting a rich and striking decoration at comparatively slight expense. Possibly this

complexions have faded, while they injure everything else. Everywhere that it is possible, have large windows with very simple and semi-transparent curtains.

From the point of view of health it is often dangerous to use indiscriminately this or that color of paper. Very many of the green papers commonly sold should be avoided, because the base of the coloring matter is arsenic; however, the light, cheerful greens are the best for the eyes, and at the same time the colors that give more life and gaiety to a room.

Whenever there is no poison in the coloring matter, such papers are certainly extremely satisfactory, and as green can be made, and that cheaply too, with other materials, it is to be hoped that they may soon be used with safety everywhere.

Yellow chrome papers, which frequently show the most charming play of colors, are among the most dangerous, the basis of that color being lead. The not less charming mineral yellow with its changing shades is also made with a color whose base is lead. The reds are frequently obtained from bases of lead and are injurious, while most people are aware of the dangers that lurk in the use of Prussian blue.

Papers having a white background or of delicate tints are generally the least harmful, and at the same time are the ones most pleasant to the sight, although it must be confessed that they are extremely trying for a coquettish woman who is not an absolute belle!

Some papers are colored with an extremely fine powder which is, during the process of manufacture, attached to the paper by means of glue. This glue when entirely dry holds the particles of coloring matter in place, but after a certain length of time, the changes of temperature, alternating from hot to cold and from dry to moist, cause the glue to lose somewhat of its adhering quality, and little particles of powder are set at liberty and float about in the air which is breathed. They settle upon everything, even upon the food placed upon the table, and from these causes there is sometimes considerable danger to health, especially in the case of the so-called velvet papers.

THE MANUFACTURE OF EGYPTIAN ANTIQUITIES.

If genuine antiques are numerous, those modern ones manufactured today are none the less so. The prices for all Egyptian antiquities, whether genuine or false, depend upon the cartouche with which they are marked as showing the sovereign under whose reign they were made. One of these ellipsoidal curves containing the graven name of Rameses II, the classical Sesostris, doubles the value of an object, and consequently it is easy to imagine how many pieces of work and monuments have within the past few years been ornamented with the cartouche of that conquering hero. If this tide of monuments continues, our great-grandchildren will have their hands full of business when they come to study the monuments left by Rameses to posterity.

But to make a cartouche is a small affair, when the manufacturing of the scarabeus and the turning out of statues covered over with inscriptions is now a business in full blast. For some time past, owing to a few carefully executed casts, it has been possible to manufacture statues out of the precious metals. The recipe is extremely simple and according to the well known rule: A statue is taken from which a mold is made, and into this mold metal is run. Later on, it is chiseled off a little, if desired, and the job is complete.

But there are some poor devils who cannot afford statues of such precious material; no matter, they make them of earthenware and glaze them; indeed, some remarkable results are obtained. It would appear that for some time past most beautiful very large pieces in silver have been made of this material. In the same manner, bronzes of a good quality can be made, and we were shown models of funerary statuettes extremely well executed.

The art of giving an antique platina or green rust to Egyptian objects is very widespread, but it might be remarked before going into this subject that almost all such rust is false. To be sure, any object when found in the earth is completely covered with a coating of green and verdigris with sand hardened into it; but the statue, to show its beauties, must be taken out of this envelope. Several methods are employed to accomplish this result, the most common being to place the object in a weak solution of sulphuric acid and water. Shortly the bronze becomes as smooth and clean as when it came from the hands of the founder. Our modern friends, however, always give their works a coating. There are several formulas for this purpose; the most simple are the following: First, bury the object in earth moistened with vinegar; in a short time the bronze is covered with a fine green coating. Second, heat the object and wax it; then heat again, and the wax in melting produces a blackish

substance, which has only to be rubbed with a woolen rag. We give there two methods, but there are many others; in fact each merchant has his own process, for it is a little trade secret which is handed down from father to son. It is unnecessary for me to remark that these imitation antiques are always covered with an irreproachable coating of this green rust.

Monuments made of stone require a more delicate workmanship; soapstone, alabaster, serpentine, and a fine and compact limestone are all used. The antique appearance is easily obtained, for the objects are covered with bitumen stolen from the mummies or else painted with colors taken from the tombs. At a first glance, and especially for a person who has not carefully studied Egyptian art, these monuments seem to have the real and genuine character. But an attentive examination will show the imperfections of the work; the figure is not well proportioned, being heavy; the hands are apt to be defective and the face grinning with angular-shaped eyes. The details of the costumer, the headdress and the particular symbols of each god are more or less unskilfully executed, while, as for the inscriptions, they rarely have any sense.

One cannot think of everything, and the Arabs have not yet learned that it would be a good thing to know the hieroglyphics, consequently the best tests of genuineness are the texts and ordinary prayers consecrated to each divinity. But progress is advancing with giant strides, and possibly the day is not far distant when some enterprising merchant will flood the market with correct texts of his own composition.

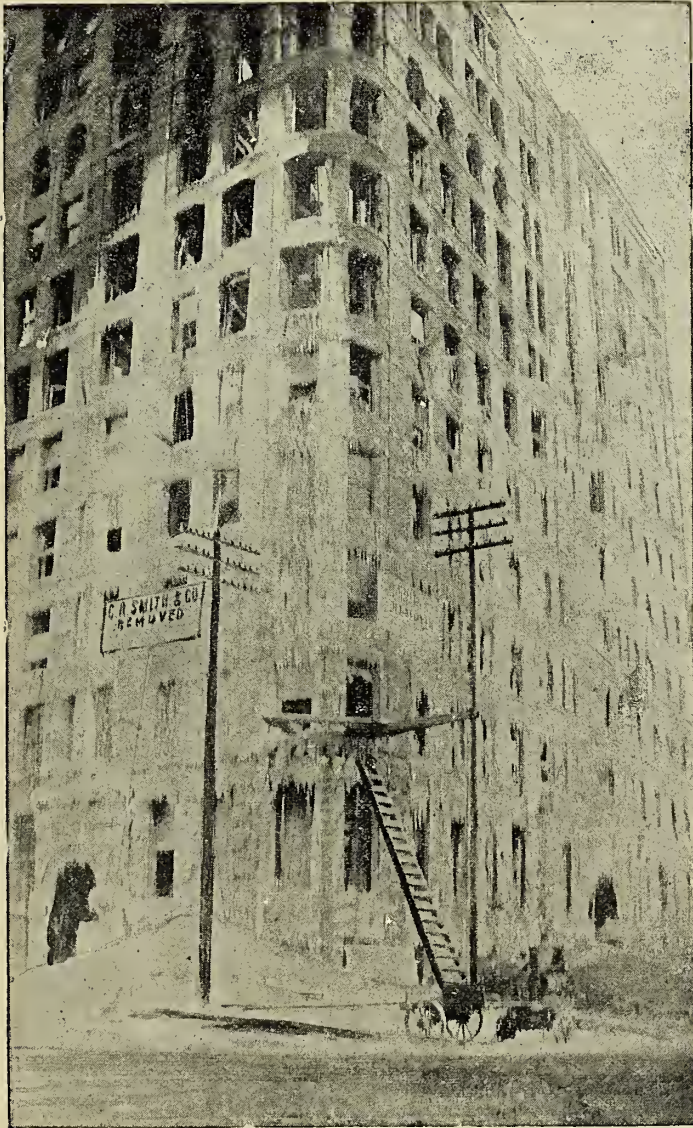
Objects in the harder stones, like black basalt, feldspar, jasper, etc., are also made, the Jews of Cairo having acquired a certain fame in this kind of industry, but the difficulties of working this class of stones and the inevitable awkwardness render these impositions rarer and more easy to recognize. However, the scarabeus is manufactured every day and some of the specimens are extremely handsome. Besides these things mentioned, how many others are made it would be impossible to tell. M. Maspero, who during his stay in Egypt made a particular point of seeking out the processes of falsification, has formed at Boulaq a little museum of imitations, and this is probably the best method to instruct tourists and show them the risk they run in buying from the natives "souvenirs" of Egypt.

SYSTEM OF HEATING THE GALLERIES OF THE LOUVRE.

The government architect of the Louvre has just completed the placing of a new system of heating for certain rooms of the palace, notably the large ones, known as the Hall of Melpomena and the Hall of the Venus de Milo. As the heating by steam of rooms containing works of art has never been approved by the French architects, this system, which is supposed to represent the best knowledge of these authorities, is of interest. The description in *La Semaine des Constructeurs* is, however, only too short; but, according to the article in question, the heating is accomplished by air under pressure, from what has been named an air-furnace (*Aéro-Calorifère*). This furnace is composed of a blower or ventilator (run by compressed air), which takes the air from the outside and forces it by underground conduits to the furnace proper, situated at some considerable distance. The ventilator has a diameter of nearly six feet, and furnishes from 18,000 to 20,000 cubic yards of air per hour. This air, forced through the conduits and upon the furnace, distributes itself evenly over the various heating surfaces which are surrounded by brick to prevent loss of heat. The furnace is so constructed as to instantly raise to eighty degrees Fahrenheit a current of air moving at the rate of 100 feet per second, and on account of the pressure constantly used it loses but little of its heat and leaves the pipes at the registers at nearly this temperature. A single heater pipe with branches to registers suffices for the distribution of the hot air, while in all other systems, on the contrary, each register requires a separate pipe to and from the furnace, from which there results a considerable simplification of the pipes. The other advantages are that where an ordinary furnace would only heat 4,000 to 5,000 cubic yards of air, this will heat three times as much with an expense for fuel of one-half required by the old system to do the same work; besides, the hot air being always under pressure, distributes itself the same as gas—even, if necessary, at a downward angle; and lastly, the great quantities of air that can be rapidly heated, render it unnecessary to keep them going so many hours.

THE Executive Committee of the American Institute of Architects will meet at New York August 18. The appointment of the date of the next meeting of the Institute at Boston will be made and other business preparatory to the convention will be transacted.

A Practical Test of Fireproofing.



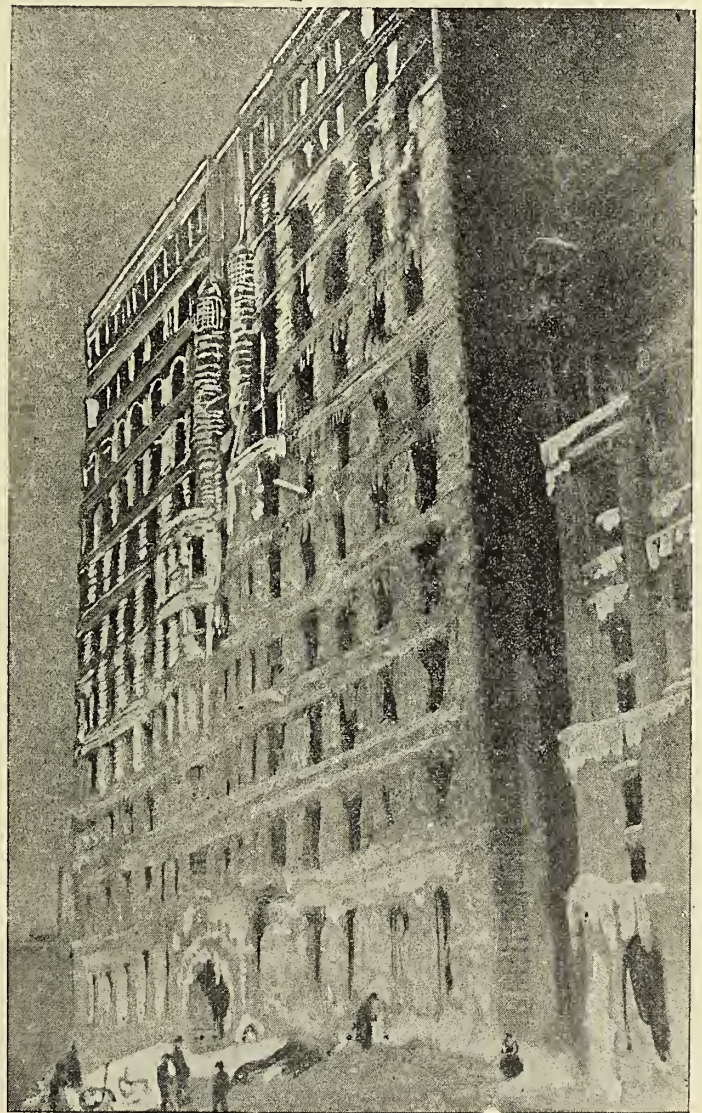
NO. 1.—EXTERIOR VIEW OF LUMBER EXCHANGE BUILDING, AFTER FIRE, FROM CORNER OF FIFTH STREET AND HENNEPIN AVENUE.

DATING back to the great fire in Chicago the question of a fireproof construction that would be light and at the same time indestructible in itself, and a perfect protection to all structural material encased within it, has grown in interest and development. At that time the heavy brick and concrete arch was in vogue. Soon, however, patents were procured by Johnson & Co., the founder of the great fireproofers, the Pioneer Fireproof Construction Company, followed by the Wight Company in Chicago, and by other parties in the East.

The stability of the methods introduced was at first looked upon with some doubt, and "tests," so-called, were made from time to time, and though the conditions were always much more severe than probably would be found in actuality, always to the satisfaction of architect and owner. In Chicago, during the construction of the Board of Trade, the six-foot flat floor arches were tested by rolling a heavy safe over them; pig iron was piled six feet high, etc., all without disturbing an arch that was only required to hold a probable 200 pounds to the square foot. There was a fire test when the Ryerson buildings on Wabash avenue were under construction. A cast-iron column (we did not use steel then) was encased in the usual manner, and one exposed was placed beside it, a loaded beam resting on top. These were surrounded with combustible material sufficient to burn a Dutch oven, and after a few hours of combustion, a hose turned on and the fire extinguished. The exposed column was destroyed, the one protected still retained its coating of tar paint, and it has mainly been such tests as these upon which architects have depended to prove the fire-resisting quality of fireproofing materials. They were good as far as they went, but in every way misleading, as the conditions of an actual fire could never be imitated, and all interested have waited for that rare occasion, a fire in a fireproof building, to show exactly how the material would act under practical conditions.

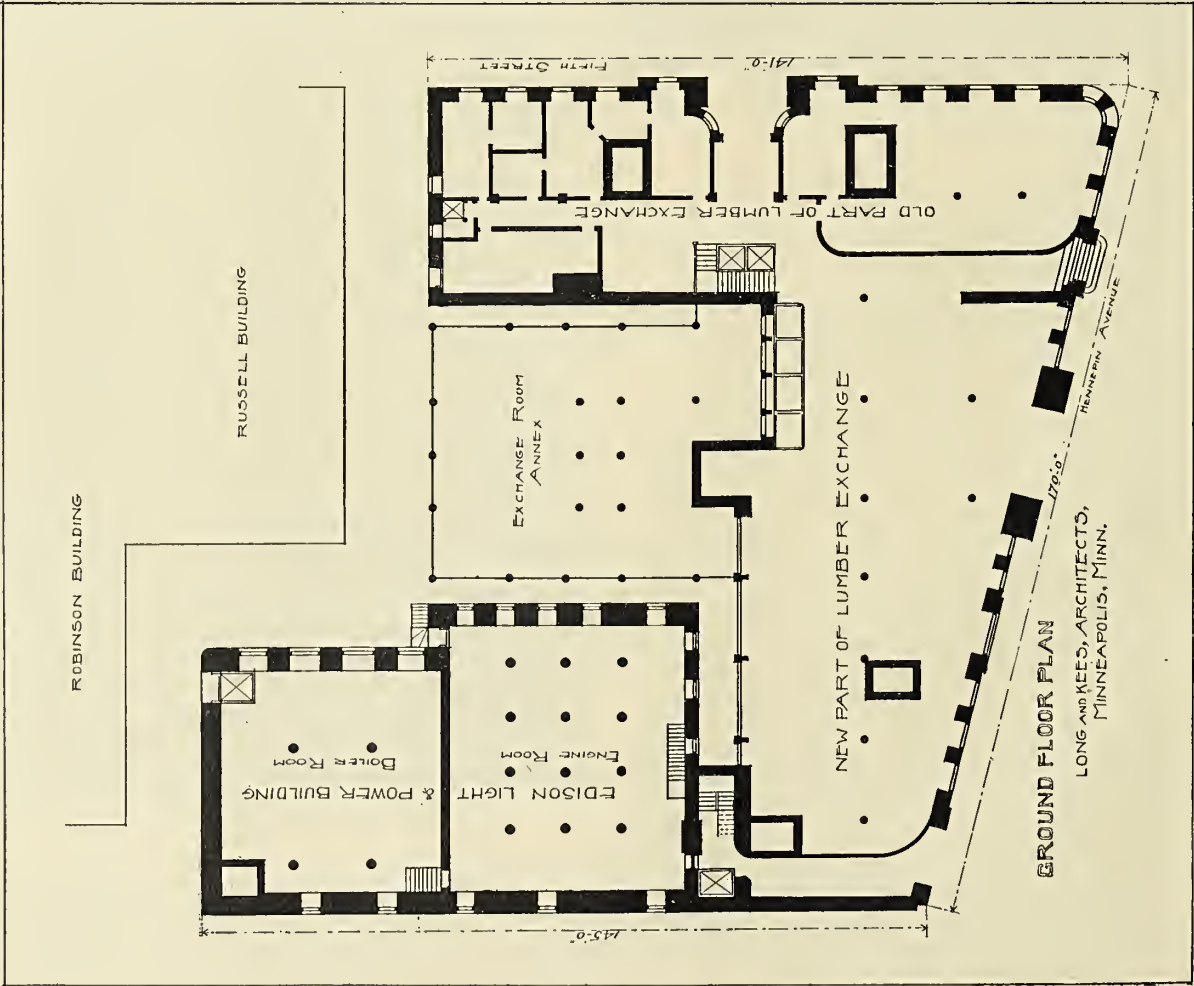
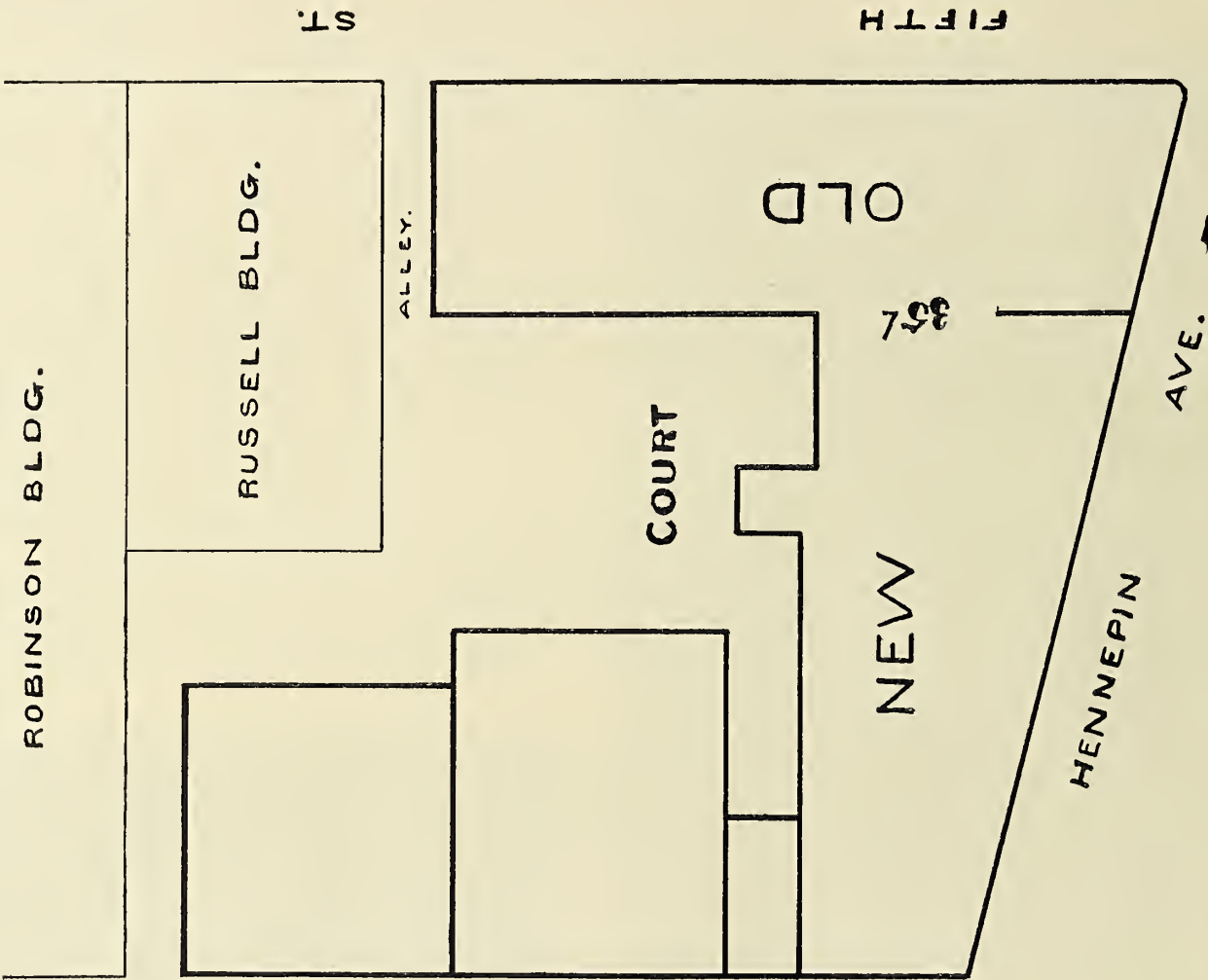
The Stillman apartment house, a six-story building in Cleveland, was fireproofed, except the top story. This burned off and the floors below were uninjured. The roof of the fireproofed Chicago Opera House, which was of wood, burned off and destroyed the ornamental part of the interior, but the structural part of the building was uninjured, and in the twenty years of progress, these constitute the main tests to which fireproof construction has been subjected, until one day last January it was telegraphed throughout the world that "the fireproof Lumber Exchange building at Minneapolis was totally destroyed by fire." Here was the test that had been looked for for twenty years, and, as a close examination proved, could not have been better planned for such a purpose had the entire structure been built and the conditions arranged for a thorough test.

On the corner of Fifth street and Hennepin avenue the Lumber Exchange built and occupied a nine-story building. The walls were of brick and the interior constructed of wooden joists supported by iron columns and girders. Both wood and iron were covered with fireproof tile, the entire system being what is known as slow-burning construction, but not fireproof. It was decided to enlarge the building, and Architects Long and Kees of Minneapolis designed a fireproof building, of longer frontage and eleven stories high, to join the old building on the east. Back of this building is the Electric building, ten stories high and fireproof. (See ground plan of buildings.) Facing on Fifth street, south of the old Exchange building, is a stone and brick building, of ordinary wood construction, five stories high, a twelve-foot alley between. This was occupied as a wholesale paint and oil store. When the new Lumber Exchange build-



NO. 2.—FRONT OF BUILDING ON FIFTH STREET, SHOWING PAINT STORE ON THE RIGHT.

ing was built two stories were added to the old building and fireproofed. Thus without design a perfect foundation for a magnificent and exhaustive test was laid, and needed only the conditions that existed at the time of the fire to carry out the test in every detail. (See outline plan.) Here was a wooden building five stories



high for the fire to start and gain headway in, and filled with paints and oils, the most inflammable material for the purpose. Twelve feet away was a nine-story building with the most approved slow-burning construction, which might have protected it sufficiently had not a large hole been left in the upper stories through which a water tank was being elevated, the ends of the joists being supported by

non-combustible construction has been made, the newspapers all stated that another fireproof building had burned (like the Jewett building, in Buffalo, that had exposed iron columns and nothing else to support the claim). A special representative of THE INLAND ARCHITECT went to Minneapolis to investigate, and the architects of the Lumber Exchange, both old and new structures, Messrs.

Long and Kees, offered every facility, and with the owners, Messrs. S. G. Cook & Co., aided by the photographs and diagrams shown in placing upon record the exact facts in every particular.

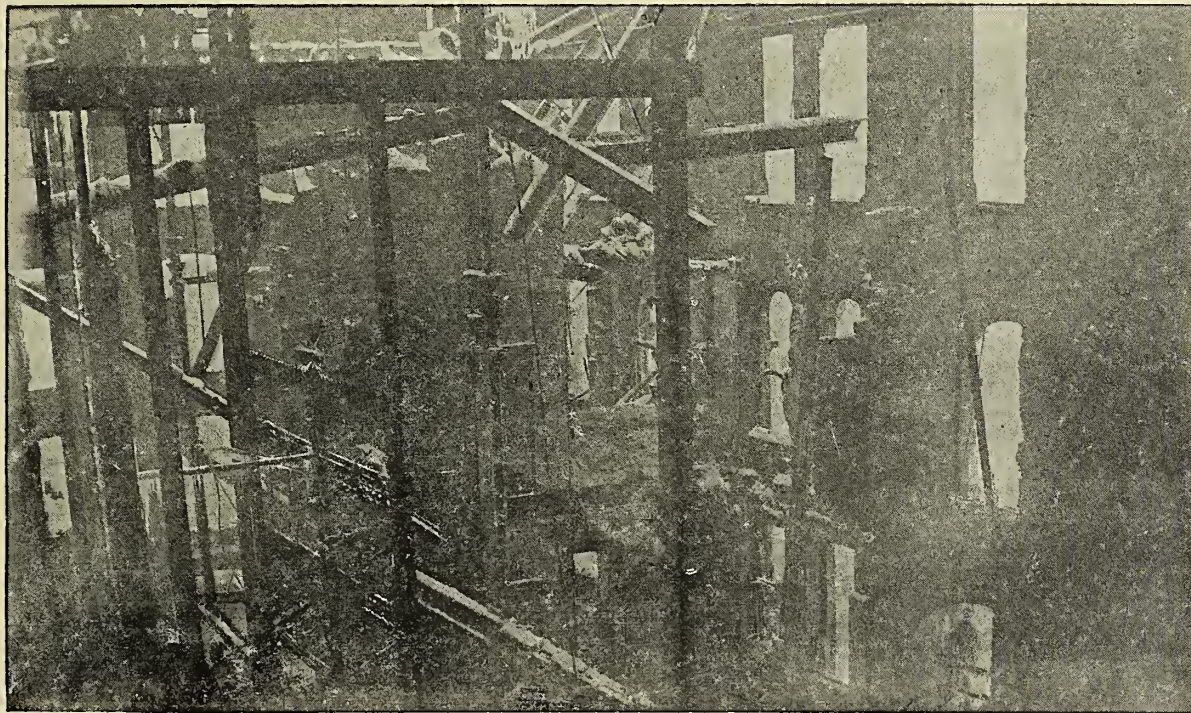
The fire gained considerable headway before it was discovered, and when the fire department responded the entire interior of the paint store was in flames. There was some controversy existing in the fire department at the time; the

chief was in Boston, and a general disorganization of the department seemed to exist. When the old Exchange caught fire, instead of ascending the stairways in the new structure and easily subduing the flames through the openings at each floor, the fire was fought from the outside, the photographs Nos. 1 and 2 showing by the

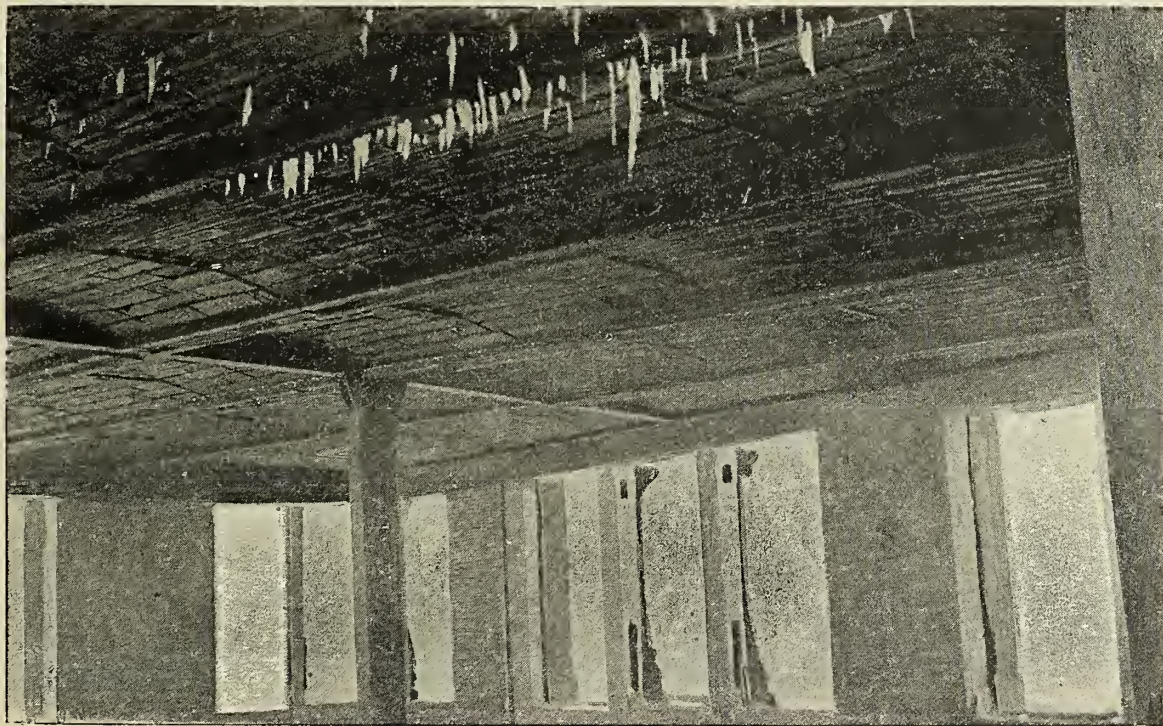
false construction of wood which caught fire and burned away, allowing the tank to fall upon the joists, destroying them and the fireproofing upon the girders below. Then the new building, almost completed, with thirty-five-foot openings at each floor through which the fire had perfect communication, and for an entire day subjected the new fireproofing to a terrible heat test. Not only this, but the two fireproof stories above the old building were supported by the iron columns which fortunately retained their tile coats and were uninjured.

The Electric building, as seen by the outline plan, was exposed to the fire upon two sides, with a large number of windows opening upon the court and alley. Thus, as has been said, a better plan for a fire test of modern fireproofing material and methods could hardly have been devised, and was not open to the objection that accompanies all alleged tests, that of having been constructed for a test and not for practical use. At the date of the fire, the new building had been plastered and was being trimmed. The iron stairways were in position, but only the risers had been placed, and the rooms contained more or less lumber used in trimming. When the fire occurred, as is usual in cases of fire in buildings in which the slightest attempt at

icicles how near the water came to reaching the ninth floor when the fire caught in the false construction. This soon burned away, allowing the heavy tank to fall, carrying with it everything in its way below the tenth floor, and the slow-burning construction burned for twenty-four hours, leaving the interior as illustrated by photograph No. 3. Of the construction, the iron columns that supported the



NO. 3.—GENERAL INTERIOR VIEW OF OLD BUILDING AFTER TWENTY-FOUR HOURS OF CONTINUOUS FIRE.

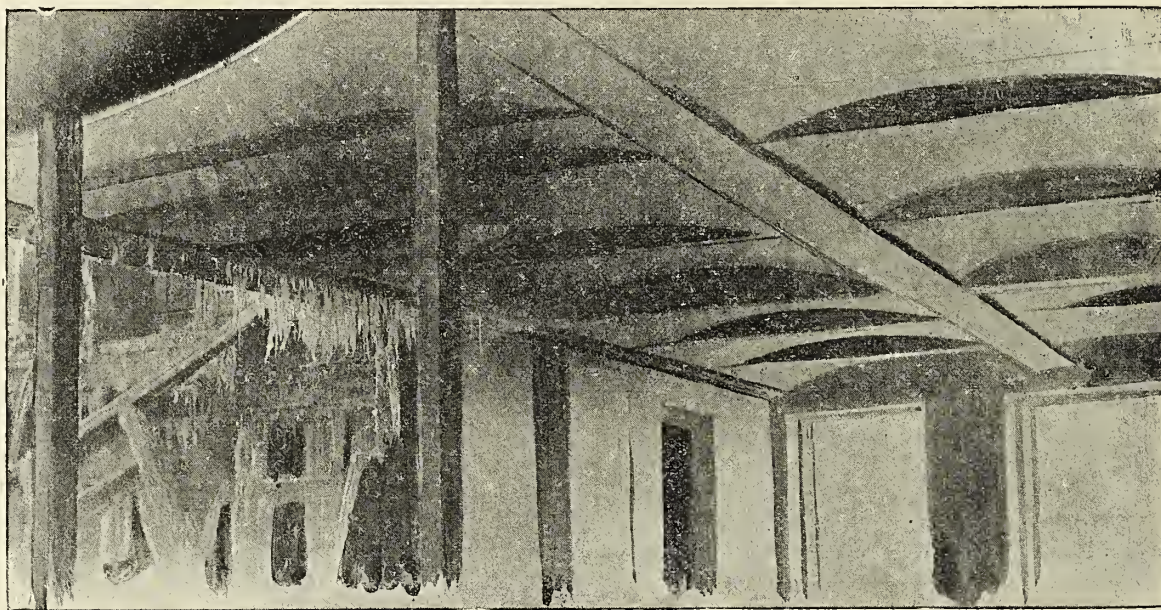


NO. 4.—TENTH FLOOR CEILING IN OLD BUILDING, SHOWING ARCHES UNINJURED AFTER THE FIRE.

iron floor beams alone remained. These still retained their fireproofing, and, being uninjured, supported the top stories. Thus the tenth and eleventh having been added, and thoroughly fireproofed when the new portion of the building was built, stood the enormous heat generated by nine stories of burning timbers without a flaw or crack, as shown in the general interior view (photograph No. 4). The hole made for the passage of the tank was only increased as far as the floor beams covered with the false construction reached (see photograph No. 3). A hole about four feet square was cut through the tenth floor after several hours of labor by the firemen in order to reach the fire below, and even here the remainder of the arch was not destroyed. These arches were seven feet between beams and consisted of five-inch hollow tile. The plastering, of course, was destroyed, but photograph No. 4 shows their perfect condition though the stone trimming around the windows was crumbled in many places.

While the value of slow-burning construction, i. e., wooden joist covered with terra cotta tile, is not fully demonstrated in this fire, the covering having been to a greater or lesser extent knocked off by the falling tank and timbers, it is sufficient to show how inadequate

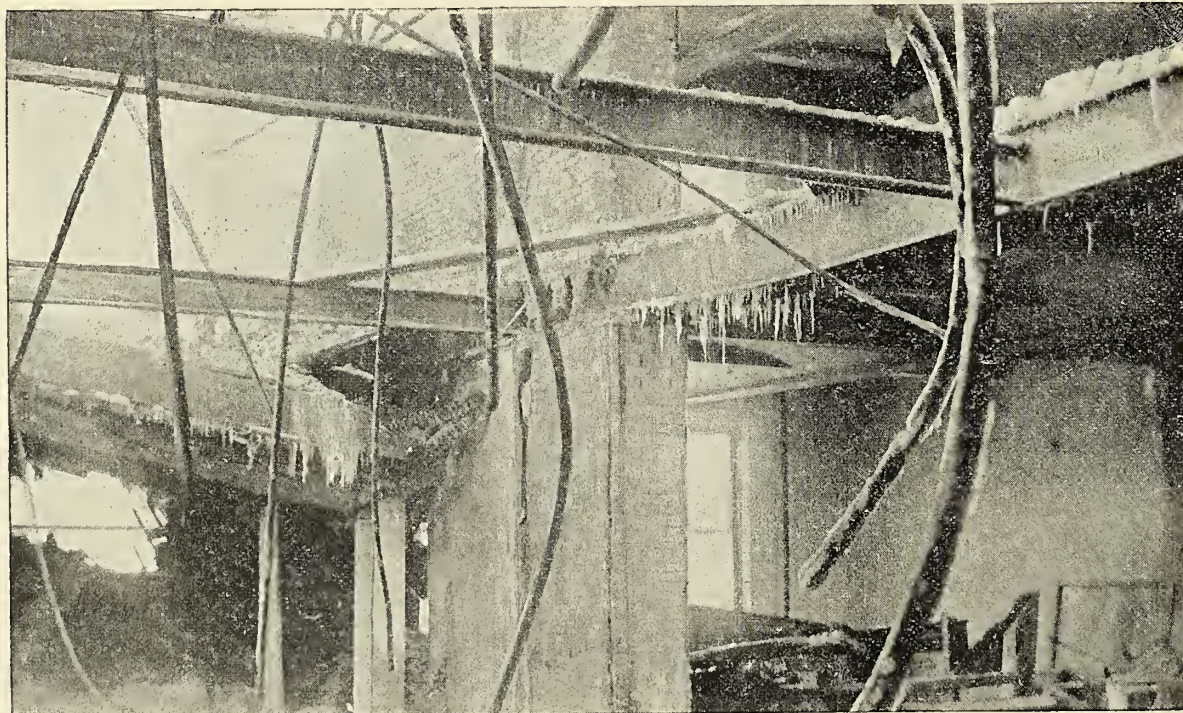
buildings in the West. Here even within five feet of the opening the plaster was intact, and though the walls of the entire building were blackened by the smoke that rolled into it from the furnace of flame fed by thousands of feet of pine joist so near it, the fireproofing was not even cracked. Photograph No. 5 shows this. Even those who have believed that a building could be and many were made fireproof, were surprised at the photograph taken from the sixth floor of



NO. 5.—TENTH STORY CEILING IN NEW BUILDING, SHOWING INTERIOR OF OLD BUILDING.

the new building, looking through the opening into the old, showing the contrast as it has never been shown before in the history of fireproof construction. A factor that must not be forgotten in summing up the stability of fireproofing is the resistance to the weight and disintegrating effects of water. Tons of water must have fallen on these arches, rapidly changing their temperature from intense heat

to cold, but neither weight nor changes of temperature, or the subsequent freezing, for the fire occurred in the coldest period of a Minnesota winter, seems to have in any way affected the arches. No greater contrast than is shown by this photograph can be well conceived of, the destruction wrought where a good enough policy was pursued, and the absolute safety where a common, practical system of fireproofing was employed. Probably the most remarkable incident of this



INTERIOR VIEW OF SIXTH FLOOR, SHOWING OPENING BETWEEN OLD AND NEW BUILDINGS, AND IRON GIRDER WHERE SAFE STRUCK.

this system is beside the regulation fireproofing system in which iron or steel joists are used.

Leaving the old building, a close examination of the new in the vicinity of the thirty-five foot opening shows this difference perfectly. While the heat was not as direct or intense as upon the ceiling just shown, had there been the slightest particle of combustible material used, the fire would have spread and destroyed one of the finest office

remarkable fire was one that shows the enormous strength of these fireproof arches. Photograph No. 6 gives a view taken from the center of the old building on the fifth floor, showing old and new part. A safe weighing upwards of 4,000 pounds, located upon the eighth floor of the old building, fell with the floors, and striking the large girder at the sixth floor bent it, and bounding up, struck full upon an arch in the fifth floor of the new building, and this

weight falling three stories neither disturbed the arch nor even cracked the plastering below.

It is needless to state that the Electric Company's building, which was of fireproof construction, separated from the other buildings by a court, even though the fire had access through the many windows, was uninjured when the new building, connected by an unobstructed opening of thirty-five feet at each floor, stood the test so well.

The greatest pains have been taken to show this fire and its effect upon fireproofing in the most comprehensive manner possible, as it is hardly probable that such a test will again occur. Pains have been taken to reproduce such photographs as could be obtained, and the whole exposition of this most disastrous yet fortunate fire should enable architects to convince clients how advisable it is to fireproof all important structures, and also that fireproofing by a standard system does fireproof. The old building is being reconstructed and fireproofed, the Pioneer Fireproof Construction Company, of Chicago, who were the original contractors for the fireproofing of all the buildings, being engaged for the work.

Ohio Chapter American Institute of Architects.



THE seventh annual meeting of the Ohio State Association, and the first since its reorganization as a chapter of the American Institute, will be held at Akron, September 17. The following circular just issued by the secretary gives full information:

OFFICE OF THE SECRETARY, }
AKRON, Ohio, August 3, 1890. }
DEAR SIR: At the last meeting of the Association of Ohio Architects, Akron was determined on as the place for holding the next annual meeting.
According to revised by-laws, our annual meeting occurs on the third Thursday of August, unless otherwise ordered by the executive committee.

In accordance with this provision of the by-laws, the executive committee have deemed it advisable and to the best interests of the society and hereby change the date of meeting this year from the twentieth day of August to the seventeenth day of September.

Since our last meeting in Toledo we have reorganized as a Chapter of the American Institute; consequently this will be our first meeting as a Chapter.

You are earnestly requested to arrange your business and make your engagements in accordance with the indicated date.

This being our initial meeting as a Chapter of the American Institute of Architects, it is desired that every member be present. A correct list of all members certified to the Chapter by the secretary and treasurer will be found in the by-laws of the Chapter, copies of which were furnished each member when notified of the result of the election creating the Chapter.

As this list only includes a portion of the architectural profession in the state, it is urged that the members endeavor to secure the application of as many other architects in good standing as possible, to present to the executive committee at their next meeting, for associate membership in the Chapter.

This is especially advisable on account of the action taken by the institute at their last session, expressly stipulating that no one shall be admitted to Fellowship to the American Institute of Architects who is not already a member of a Chapter of the Institute.

It would also add to the interest of the meeting if you should prepare a five or ten minute paper or talk on some subject of professional interest.

If you have anything in the way of drawings or photographs of your late work, fresh and interesting, bring them along.

It will be understood that you will attend the meeting unless heard from to the contrary. Bring the ladies along and let us know how many.

F. O. WEARY, President.

G. W. KRAMER, Secretary.

There were several good reasons for changing the date of meeting and the attendance should be large and representative. The meeting at Toledo last year was one of the most enjoyable ever held by a state association, and this should not only include those who participated in the entertainment provided by the Toledo architects, but those who were absent and have regretted it. As the circular intimates, ladies will be especially welcomed.

New Publications.

PETITS EDIFICES HISTORIQUE. Paris, Librairie-Imprimeries réunies, No. 2 Rue Mignon.

This is the title of a new publication by the well-known Raguenet. Like his other compilations it will appear every month. Each number will contain twelve pages of designs and details with a very short description of one or more historical buildings from which such drawings are made. According to the prospectus, "by this method the author will seek to make clear the salient points of each style, and teach students to quickly determine for themselves the nationality and style of a building, together with the period at which it was probably constructed." Subscription 23 francs per year.

BITS OF CANTERBURY CATHEDRAL. Drawn by Walter Tallant Owen. 1 vol., 12 plates; size, 6 by 9½; illuminated boards. Price, \$1.00. New York, Wm. T. Comstock, 1891.

The history of Canterbury Cathedral, as well as the variety and beauty of its architecture, renders it one of the most interesting in England. St. Augustine in the sixth century, and Archbishop Cuthbert in the latter part of the eighth, were the earlier builders, and the succeeding ages had the help of Odo, Lanfranc and Anselm in repairing, rebuilding and enlarging.

The styles of the different periods have all had an opportunity for display, and the cathedral today exhibits nearly all the classes of Norman architecture, while parts are impressed with the purely English style. It was here that, after the fire in 1174, the pointed arch

was first introduced into England, having been employed by certain artists or artificers summoned from France, and here also are seen some of the best and most characteristic forms of purely English window tracery found in the cathedrals of England.

It is easy to understand the attraction that this place has for the traveler, be he artist or layman, and this little book is a record of a few things seen and appreciated by Mr. Owen during a brief visit to Canterbury. There is a view of the entire cathedral, and of the separate "bits" that follows a glimpse of the pinnacles through Mercery Lane, and the "Bell Harry," which is the central tower of the cathedral, and so called from a small bell hung in the top. This was formerly the "Angel Steeple," having a gilt figure of an angel crowning it, and is said by Fergusson to be, for poetry of design and beauty of proportion, the best in England, and superior to any of its class to be found elsewhere.

A view of the cloisters, the northwest tower, baptistery, turret on southwest transept, Norman stairway, ruins of old cloisters, and the Prior's gateway, are among the plates. Before each plate is a title page, adorned with some detail of construction, or of some ornament or object in the building. Among these will be found mosaics from the floor, panel from ceiling, wrought-iron work, carved woodwork, a chair, a hinge, and the armor of the Black Prince.

Mr. Owen exhibits a fine and discriminating taste in his selection of various subjects for his sketches, and shows excellent ability as a draftsman. The drawings are well reproduced upon fine paper, and aside from the pleasure to be drawn from a casual inspection, they will be of practical service to those who wish them for a study.

ACADEMY ARCHITECTURE AND ANNUAL ARCHITECTURAL REVIEW, 1871. Edited by Alex Koch, architect. Published by William Mueller, 695 Broadway, New York. Price \$2.50.

The third volume of Academy Architecture contains nearly as much matter as did the former volumes combined, which accounts probably for the increased price. The selections, which are made from drawings hung at the Academy exhibit, and from published designs of work executed during the past year in England and abroad, are admirable, and the work is of marked value to architects and to students. As an innovation America has been included in the "abroad" and has been called on to furnish subjects, while those chosen give confidence in the compiler's critical taste. The condensed form makes the publication useful in a working library, while the wide diversity of subjects and countries represented give it unique value as a book of reference.

PRINTED SPECIFICATIONS, published by George W. Grove, architect, Washington, D. C. Price, 30 cents each; \$3.50 per dozen, express paid.

This is a printed specification after the usual pattern of alternate print and blanks for interlineations, covering twenty pages, legal cap size. Among peculiar features we note an index on the front cover of more than one hundred items.

The first page contains general clauses and conditions, nine in number. The others are devoted to the various trades in the following order: Excavation; stone-work; brick-work; concreting; carpentry; hardware; plumbing; painting and glazing; tinning and roofing; galvanized iron; zinc and copper; wrought and cast iron; slating; terra cotta and tiles; furnace, range, etc.; bells and speaking tubes.

The brick-work, carpentry and plumbing are treated with considerable fullness, though, strange to say, there is no mention of rubble masonry, which, in all regions convenient to quarries, forms the foundation to brick walls, and is also extensively employed for the walls themselves of the more expensive buildings.

No distinction appears between the general contractor and the sub-contractor, and we find no provision for giving bond, for protection against liens, for liability from accidents, nor for insuring the building during its erection. Nor does the specification define who shall lay out the work and be responsible for its lines, levels, etc., etc.,—whether the architect is expected to do this, or some one of the contractors, and if so, which one.

The sections on stone work, painting, tinning and roofing, iron work, and plaster are far from complete, and there is nothing whatever about fire-proofing, elevators, dumb waiters, mantels or electricity, except in the index. The blanks left for interlining are probably as well arranged as is usual; in some places they are much too liberal for ordinary work, and in others as much too limited.

The bricklayer is required to "repair all damage to street or neighbors' paving." Where the street paving is other than brick, this might be better done by some other mechanic than the bricklayer.

The framing specification is quite incomplete. It should require headers to be doubled as well as trimmers. The mode of framing, whether by tenon and tusk or otherwise, should be prescribed, also the gauging, crowning, jointing and beveling of floor joists, and the sizes and location of joist anchors.

ARTISTIC HOMES, IN CITY AND COUNTRY; with other Examples of Domestic Architecture, by Albert W. Fuller and William A. Wheeler, architects; fifth and revised edition with seventy full-page illustrations. Boston: Ticknor & Co.; price, \$6.00.

It is seldom that perfect self-complacency is more frankly exhibited than in the "introductory note" to this volume. One reads and marvels, and then reads and marvels yet again. So good reading is this bland preface that we cannot refrain from quoting a portion of it. Say our authors, speaking of the fifth edition: "In the preparation of it they have endeavored to alter and improve the whole work, so as to make it, as far as possible, representative of the latest phase of American domestic architecture. With this object in view they have discarded many of the older illustrations, and have replaced them by ones of later work; adding, at the same time, a few miscellaneous examples of other buildings recently designed by them in the line of

domestic work. * * * To keep abreast of the tide of improvement; to aid those about to build to secure what is best and most desirable; to show them how use, beauty, and economy may be combined; are the aims of the authors. They venture to hope that their book will be found quite as interesting and suggestive, if not more so, than heretofore." If we had been besought to suggest any modifications of this preface, we should have recommended only its punctuation, here and there, with marks of interrogation. The book, in fact, belongs to the genus "trade circular," wherein self-laudation is accordant with modern commercial etiquette; and candid criticism seems therefore superfluous if not positively ungenerous.

We are not sure that we know exactly how much of merit is to be posited of the average of architectural work; but we think we shall be safe in saying that the work herein illustrated is fully up to the average. The authors have not designed monstrosities, and the plans are not bad. The shortcomings of their work are on the finer points, judged by a somewhat rigorous standard, i. e., that which they assume in their preface. For instance, their porches and *porte-cochère* entrances are uniformly unsuccessful in that they do not harmonize with the buildings, being of the nature of desultory appendages; their use of the arch over basement windows, in many instances, wars with the rest of the design; their handling of groups of dormers is not often pleasing; their plans of main stories are seldom pleasing in what, for lack of a better term, may be called *ensemble*, that is, they have not grasped the plan as a whole, and instead of disposing rooms so as to compel broad views, and of placing important interior details as to be effective from several points, they succeed only in bringing together mechanically a number of rooms offering utility without beauty; they make such invariable use of certain features that it becomes mannerism, i. e., the fireplace under the main staircase, or the recessed balcony spanned by its round arch, the carving and decorative detail is designed at too close range, and is therefore not happily disposed and becomes incongruous viewed as a whole; and in the matter of elementary planning there is a conspicuous absence of broom closets, housemaids' closets, and well-lighted linen rooms. The volume contains several studies for "proposed" houses, and these are decidedly inferior to the executed work. Are a deduction and a moral to be drawn from this? Any query as to the value of the book is at once brought face to face with the fact that here is a fifth edition; the demand certainly demonstrated a need, and indicates that the book measurably meets it.

Association Notes.

ST. LOUIS CHAPTER A. I. A.

On June 30, at the regular monthly dinner and meeting of the St. Louis Chapter of the American Institute of Architects, Architect J. H. McNamara read a paper upon St. Louis spires, with criticisms upon the five best designs submitted in the recent competition for a gothic tower with spire, for the unfinished spire of Christ Church, St. Louis. The members of the Architectural League, the "sketch club" of St. Louis, were invited guests, and there was a full attendance of both architects and draftsmen. Mr. McNamara's paper was well received, and at its conclusion a vote of thanks was passed. The subject matter of the paper was somewhat in the line of that contained in that upon domes and towers, read by Mr. McNamara before the last convention of the American Institute of Architects and was in every way an excellent and scholarly criticism.

CHICAGO QUARRY OWNERS ASSOCIATION.

It was suggested at the June meeting of the association by R. W. Maxton that the meetings of the association could be productive of much benefit to members if a few changes in programme were inaugurated. Mr. Maxton claimed that the association represents a large amount of capital invested, and furnishes material for large contracts yearly and yet has no permanent quarters from which to answer questions and in which to exhibit samples of stone. In justice to the association members and the architects of the city, they ought to be able to show them into a convenient hall or room, fitted with cases containing samples of all stones represented in the association, with the analysis and geology and all other data pertaining to the same; a uniform price list should be established. The association should also subscribe to literary works bearing on this question, and in time accumulate a valuable library consisting of treatises, reports and the like, and also should have in this room a testing machine, seeing there is but one in the city; also a system of credits similar to that operated by Dun and Bradstreet, for the strict use of our members, could be established; and to have all these in charge of a competent person for daily inspection, from 9 till 4, would be of real value to incoming members.

Mr. Maxton's plans have been taken up by the president, C. B. Kimbell, and it is hoped they will become features of coming meetings of the association.

EDINBURGH ARCHITECTURAL ASSOCIATION.

The members of the Edinburgh Architectural Association had their annual excursion May 30. Leaving the Waverly station at 9:20, they travelled direct to Kinross, where machines were in waiting to convey them to Kinross House. Mr. Thomas Ross, who conducted, explained that it had been designed and erected in 1685 by Sir William Bruce, the celebrated architect, who purchased the estate a few years previously from the Earl of Morton. It is situated on the shore of Loch Leven, and is a good example of the palatial style of architecture of the period. The Lyon-King-at-Arms (Mr. G. Balfour Paul, advocate), next acted as guide, and took the party to Tullibole Castle, which was erected by Sir John Halliday in 1608. It is a nice specimen of the castellated domestic architecture of the period. A visit was also paid

to the old churchyard close at hand. From Tullibole Castle the party went to Aldie Castle, situated on a commanding height overlooking the valley of Pow. The castle, which is in fair preservation, belongs to the Dowager Marchioness of Lansdowne. Cleish Castle and Dowhill Castle were also visited. Cleish Castle is beautifully situated among fine timber, and is a modern restoration of a fine old ruin. The edifice originally belonged to Lord Ochiltree. A fine view of Loch Leven was obtained from Dowhill Castle. This castle is the somewhat dilapidated remains of what has been a large castle on the courtyard plan. It originally belonged to a branch of the famous Lindsay family. Dinner was partaken of in Haris Hotel at the close of the day's proceedings, and the party returned to Edinburgh in the evening, highly pleased with the day's outing.

Mosaics.

POULTNEY BIGELOW, who was a schoolmate of the German emperor, will contribute an article to the Midsummer (August) number of the *Century* on the first three years of the emperor's reign—the third anniversary of his ascent to the throne having taken place on June 15. Mr. Bigelow believes that "since Frederick the Great no king of Prussia has understood his business like this emperor," and in this article he gives what he considers the secret of the power of William II with his people, and incidentally contributes many facts regarding his life. This number of the *Century* will be especially rich in illustrated articles and complete stories, and the illustrations of Mr. Bigelow's paper will include a number of views of the palaces at Berlin and Potsdam, and engraved portraits of the emperor and empress will form a double frontispiece.

TO THOSE contemplating a trip to the mountains in search of health or pleasure, Deer Park, on the dome of the Alleghany Mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Alleghany range. The hotel is equipped with such adjuncts conducive to the entertainment, pleasure and comfort of its guests as Turkish and Russian baths, swimming pools for both ladies and gentlemen, billiard rooms, superbly furnished parlors, and rooms single or en suite, all facilities for dancing, an unexcelled cuisine and a superior service. The surrounding grounds as well as the hotel are lighted with electricity, have cosy and shady nooks, meandering walks, lawn-tennis courts and grassy playgrounds for children within full view of the inviting verandas. Six miles distant on the same mountain summit is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodation of its guests. Both hotels are upon the main line of the Baltimore & Ohio railroad, have the advantage of its splendid vestibuled limited express trains between the East and West, and are, therefore, readily accessible from all parts of the country. Tickets good for return passage until October 31, are on sale at greatly reduced rates at all principal ticket offices throughout the country. Tickets reading from St. Louis, Louisville, Cincinnati, Columbus, Chicago and any point on Baltimore & Ohio system are good to stop off at either Deer Park or Oakland, and can be extended by agent at either resort if deposited with him for safe keeping. For full information as to rates, rooms, etc., address George D. De Shields, manager, Deer Park or Oakland, Garrett County, Maryland.

THE fact that stone façades are becoming more popular every day with the home-building public, it is a serious question as to which class is the better for such a purpose. A number of stones are known to exfoliate under climatic changes and others to discolor or disintegrate from the rains of spring and autumn and the frosts of winter. Others again offer no resistance to fire, while others again are such poor tool-workers that, where ornamentation is a prerequisite, whatever other good qualities they may possess is overtopped by this essential lacking. Possibly, taking all things together, what is known as the "Potsdam red sandstone" offers better results than any of the other building stones. At least it has no superior. Under a government test wherein fifty-eight examples, embracing all the accepted granites, marbles, limestones, sandstones, etc., were tried as to their crushing strength, the Potsdam red sandstone proved to have no competitor in the race. It is a wonderfully durable stone, being composed of pure silica. As to its resistance of fire it is only necessary to state it is used as a lining to furnaces instead of fire brick. It breaks true under hammer and can be sawed, rubbed and carved with the same facility as the best granites. It does not stain, but can be washed off as readily as glass. As sidewalk flagging it gives a smooth surface, and the grain never allows it to become slippery from wear or wet. Frost does not affect it. The strata is such that stones of any shippable dimensions can be taken from the quarries, and that too without flaw or blemish in them. Somebody once said "God doubtless could have made a better berry than the strawberry, but he never did," so he might have made a better building stone than the Potsdam sandstone, but he never did, or if he did, it hasn't yet been discovered.

Obituary.

One of the youngest architects in the profession, and one whose promise for the future was great, Mr. T. L. Dismukes, of Nashville, Tennessee, died in that city, June 3, of pneumonia contracted in February last. At the time of his death, Mr. Dismukes had completed a number of residences that showed refinement and good taste, and also several works of considerable magnitude in his native city. He was a graduate of the Vanderbilt University, and was twenty-nine years of age. Architect G. Zwicker has taken charge of Mr. Dismuke's unfinished work, and will continue his practice.

Our Illustrations.

Village Hall, Evanston, Illinois; Holabird & Roche, architects, Chicago.

The Venetian Office Building, Chicago; Holabird & Roche, architects.

Residence for James Charnley, Chicago; Adler & Sullivan, architects.

New Orleans Passenger Station, Illinois Central Railroad; Adler & Sullivan, architects, Chicago.

Residence of Charles Pinkney Wheeler, Evanston, Illinois; Frederick Baumann and J. K. Cady, architects.

Interior view, Synagogue, corner Indiana avenue and Thirty-third street, Chicago; Adler & Sullivan, architects.

Perspective view of Mines and Mining Building for the World's Columbian Exposition, Chicago; S. S. Beman, architect, Chicago.

Perspective view and plan of the Woman's Building for the World's Columbian Exposition, Chicago; Miss Sophia G. Hayden, architect, Boston.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residences, corner Prairie avenue and Twenty-sixth street, Chicago; Charles S. Frost, architect.

Synagogue, corner Indiana avenue and Thirty-third street, Chicago; Adler & Sullivan, architects.

Summer Residence of Samuel Mather, Cleveland, Ohio; C. F. Schweinfurth, architect. Two full-page views are given.

Residence at 620 Division street, corner Lakeshore Drive, Chicago; Irving K. Pond and Allen B. Pond, architects. Three full-page views are given.

Synopsis of Building News.

Butte, Montana.—Architect H. M. Patterson reports: I. O. G. T. building, 28 by 100 feet, brick and stone, pressed brick front, steam heated, three stories; cost \$20,000; Jayner Bros., builders. Carder building, 21 by 70 feet, two stories; cost \$5,000; Peck Bros. & Co., builders. For John R. Bordeaux, two-story and basement dwelling, 47 by 50 feet; cost \$7,500. For Mr. Gunther, one-story building, 42 by 50 feet; cost \$2,500. For John M. Stewart, two-story and basement double dwelling, modern improvements; cost \$10,000. The above all under way. The following are projected: J. A. Herrington, two-story double dwelling, 42 by 30 feet; cost \$3,500. F. H. Shepard, remodeling dwelling; cost \$3,000. Three cottages, aggregate cost \$10,000.

Chicago, Ill.—Architect W. J. Van Keuren: Making plans for Congregational Church, to be erected at Mont Clare; to be of frame with stone basement, have stained glass windows, etc.

Architect W. Henri Adams: For J. K. Armsby, Jr., a two-story frame residence, hardwood finish, furnace, etc.; to be erected at Evanston. For Henry S. Martin, at La Grange, and S. F. Davidson, two neatly designed frame houses, stone cellars, hardwood interiors, plate and beveled glass, electric light, incandescent electric light.

Architect C. H. McAfee: A six-story factory on West Van Buren street; to be of pressed brick and stone front, with gravel roof, have steam heat, electric light, size 111 by 166 feet; cost \$75,000.

Architect J. C. Swalm: For J. T. Moore, on West Jackson street, a four-story flat building, 50 by 110 feet in size; to be of Ashland variegated brownstone front, with stone bays, hot-water heating, elevator, electric light, oak finish, plate and beveled glass; cost \$30,000.

Architect H. H. Boyington: For Daniel Duffy, on State street, south of Sixty-seventh street, a three-story store and flat building, of Bedford stone front.

Architect C. S. Corwin: For C. S. Johnson, at Hampden court, near Wrightwood avenue, three two-story, basement and attic residences; to have stone fronts, hardwood finish, plate and beveled glass, furnaces, slate mansard roofs, etc.

Architect E. H. Turnock: For C. P. Hall, at La Grange, a two-story frame residence; stone foundation, interior to be finished in sycamore, oak and California redwood, have hot-water heating, etc. For L. H. Mitchell, at La Grange, a two-story frame residence, with stone foundation, stained and plate glass, furnace. For Mrs. Anna C. Jack, at La Grange, a frame, stone basement, hardwood finish, furnace, etc. For L. H. Holmes, at La Grange, a two-story frame residence. For J. B. Russell, a two-story frame residence. For H. L. Conard, at Hinsdale, a bungalow residence; hardwood finish, furnace and all conveniences. For G. W. Davis, on Thirty-third street, near Cottage Grove avenue, a four-story apartment house, of pressed brick and stone front, with copper bay and cornice, marble wainscoting, tiled floors, hardwood finish throughout, hot-water heating, nickel plated plumbing fixtures, laundry dryers. For Charles Coonley, at South Bend, Indiana, a two-story frame residence. For Dr. D. L. Peeples, a two-story residence of stone, hardwood finish, furnace, etc.

Architects J. F. & J. P. Doerr: Making plans for S. S. Peter and Paul Catholic school, at Naperville, Illinois; two-story and basement, 58 by 86 feet; cost \$15,000; school rooms on first floor and hall on the second. For Father Genuit, on Hoyne avenue and Thirty-sixth street, Catholic church and school, 52 by 96 feet; cost \$15,000; pressed brick front, with stone trimmings and slate roof. For P. Cragin, on Wabash avenue and Forty-first street, a two-story flat building, of Bedford stone front with gravel roof, furnaces, etc. For C. Riemensperger, at 2071 Wentworth avenue, a three-story and basement store and flat building, of St. Louis pressed brick and Portage brownstone. For John Becker, at 3654 Wentworth avenue, a four-story and basement store and flat building, of St. Louis pressed brick front with buff Bedford stone trimmings and galvanized iron bays.

Architects Snyder & Nothnagel: For P. O'Donnell, southeast corner of Adams street and Spaulding avenue, a two-story, basement and attic residence, of buff Bedford stone front, slate mansard, copper bays and cornices, steam heat, etc. For J. L. Dickhaut, at 625 Kedzie avenue, a two-story flat building; to be of buff Bedford stone front, oak finish, stained and plate glass, etc.

Architect E. M. Newman: For Rev. C. G. Trusdell at Lake Bluff; a two-story frame residence; size 40 by 55 feet; brick basement, pine finish, etc.

Architect F. Foehringer: For Fred. Bohl, on Wood street, corner of Lull place; a three-story and basement flat building; of Tiffany pressed brick and Bedford stone.

Architect A. F. Hussander: For L. Brown, a three-story and basement flat building; of St. Louis pressed brick and Bedford stone. For P. A. Urbanus on Baxter street, near Wellington avenue; a two-story flat building; of frame with brick basement. For P. K. Glimme, on Belmont avenue; a two-story flat building; of St. Louis pressed brick and buff Bedford stone. For William Borg, on Belmont avenue; a two-story flat building; of pressed brick and stone.

Architect F. B. Abbott: For J. Johnston, at 1182 Adams street; a three-story residence; to have a buff Bedford stone front, hardwood finish, furnace, etc. For a stock company of whom W. G. Stanford is president; a four-story apartment house; size 45 by 125 feet; to cost \$60,000; on Thirty-sixth street and Ellis avenue. To be of light colored pressed brick with pink stone trimmings; hardwood interior finish throughout, steam heat, marble wainscoting and tiled floors, elevators, electric light, etc. Also for a stock company, to be erected corner of Stanton avenue and Oxford court; a four-story apartment house; 46 by 125 feet in size; cost \$50,000. Pressed brick and stone, steam heat, electric light, etc. He

is also completing the elegant residence for C. C. Heisen, on the Lake Shore Drive between the residences of Hon. Robert T. Lincoln and Professor Swing. It is constructed of granite, and is elaborately finished in hardwoods, with mosaic floors, tile bathrooms, Spanish tile roof, hot-water heating, electric light and the finest of sanitary arrangements; the cost will be \$75,000.

Architect George Grussing: For Thomas Jubb, on Fulton street, near Francisco; a two-story flat building; of Tiffany pressed brick and Bedford stone, with galvanized iron bays. For S. W. Roth, on Homan street near Chicago avenue; a two-story flat building; of pressed brick and stone, hot-water attachments, furnaces, etc. For James Barry on Lake street near Garfield Park; a two-story flat building; of Tiffany brick and stone. For George McLester at Ridgeland; ten eight-room frame residences, to have stone basements, stained glass, bathrooms, furnaces, etc.; cost \$30,000.

Architect A. G. Ferree: For B. F. Chase and J. E. Tate, three two-story residences; to have rockfaced blue Bedford stone fronts, slate mansard and gravel roof, hardwood finish, furnace, plate and beveled glass, electric light and all the sanitary etceteras; they will cost \$15,000.

Architects Park & Fuller: For William Ashton & Son, on Calumet avenue, between Forty-second and Forty-third streets, four three-story residences, to have stone fronts, hardwood finish, plate and beveled glass, furnaces, etc.; cost \$32,000. For R. R. Thomas, on Jackson street, east of Sacramento avenue, a two-story and basement Bedford stone flat building, hardwood finish, furnaces, etc. For R. L. Finch, at 1564 Monroe street, a two-story Ashland brownstone front residence; cost \$7,000.

Architect W. L. Carroll: For the Bowman Dairy Company, on Thirty-fifth street, near Indiana avenue, a three-story building, to contain office, milk depot, and apartments. The front will be of stone, with stone arches and columns, copper bays and iron grill work, hardwood interior, electric light, etc.; cost \$20,000.

Architects J. M. Van Osdell & Co.: For Reid, Murdoch & Co., southeast corner of Franklin and Monroe, two additional stories, of cut stone front; steam heat, electric light, etc.

Architect Simeon B. Eisendrath: For Michael Reese Hospital, a three-story training school for nurses, and lying-in hospital; size 30 by 80 feet; to cost \$15,000. Pressed brick and cut stone front, steam heat and the best of sanitary fixtures will be put in.

Architect D. A. Lapointe: For H. E. Bandell, on Walnut street, east of Sacramento avenue, two two-story Bedford stone front flat buildings; furnaces, beveled and plate glass; cost \$14,000. For E. J. Lewis, on Washington boulevard, east of Albany avenue, a two-story stone front residence, hardwood finish, hot water heating; cost \$10,000. For George Ilett, at 153 Sacramento avenue, six two-story flat buildings, of pressed brick and stone; cost \$30,000. For N. Catellier, on Monroe street, a two-story Bedford stone front flat building; two furnaces, etc.; cost \$8,000. For Justice Scully, on Warren avenue, near Hoyne, a two-story Bedford stone front residence; stained, plate and beveled glass; furnace; cost \$8,000. For J. Short, on Park avenue, near Leavitt street, a two-story residence, to have a front of Bedford stone, hardwood finish, furnace; cost \$7,000. Also making plans for six three-story stores and flats, to be erected on Fullerton avenue, near North avenue. Pressed brick and stone; cost \$30,000. Architect D. A. Lapointe has removed to 125 Clark street, room 8.

Architect W. G. Barfield: For John O'Malley, on corner of Forty-fifth and State streets, a three-story block of stores and flats, 125 feet front on State and 70 feet on Forty-fifth street, Bedford stone front with handsome copper bay and tower on the northwest corner, to have hardwood interior; cost, \$44,000. When completed will add another 125 feet, thus occupying the whole block. The same architect is taking figures on ten-story apartment house for Dr. F. D. Clark, to be erected at 333 Michigan avenue. The front will be of Bedford stone and granite, interior to have marble wainscoting, mosaic floors, elevators, electric light, steam heat, steel beams and columns.

Architects Crowen & Richards: For Mrs. S. K. Elmore, a large number of frame cottages, to be erected near the Grant Locomotive Works. Also taking figures on a four-story apartment house, to be erected on Sixty-third street and Star avenue, Bedford stone, buff pressed brick, steam heat, electric light, marble wainscoting, oak finish; cost \$30,000. Crowen & Richards have removed to the Boylston building, room 516.

Architect Oscar Cobb: For Hefflerin Opera House, at Livingston, Montana, two-story building, to contain bank, store and offices, with theatre in the rear; the front will be of stone, hardwood interior, steam heat, electric light, etc.; cost \$50,000.

Architect Fred Ahlschlager: Taking figures for German Lutheran Church, to be built at Washington Heights; frame, stone basement, stained glass windows, etc. Also made plans for German Lutheran Church, to be erected at Forty-ninth and Dearborn streets; stone basement and frame, stained glass, furnace, pews to seat 850 people.

Architect J. C. Brompton: For Sam Brown, Jr., two three-story and basement apartment houses, 42 by 52 feet each, to cost \$36,000; the first story will be of rockfaced stone and above of pressed brick and stone with terra cotta panels; they will be finished in hardwood throughout, have furnaces, gas ranges, gas fixtures, cement sidewalks, etc.

Architects Hetherington & Warner: For Mr. Nelson, on Wallace street, near Thirty-eighth street, a three-story store and flat; to be of Bedford stone front with copper bays, plate and stained glass. For J. J. Warde, on Oak street, near Rush street, a three-story flat building of brownstone front, hardwood finish, etc.

Architect Perley Hale: For F. C. Liphard, on Vernon avenue and Thirty-seventh street, two three-story residences; to have stone fronts, yellow pine and oak finish, furnaces, etc.; cost \$14,000. He also made plans for a five-story hotel 25 by 103 feet in size; to be erected on Clark street, next door south of Grace Hotel.

Architect J. E. O. Pridmore: For A. P. Spencer, on Oakenwald avenue and Forty-third street, a four-story apartment house, 104 by 75 feet; cost \$50,000. It will have two fronts of pressed brick and stone, steam heat, electric light, elevators, etc. Contracts have been let and the foundation is now being put in. He is also making plans for a two-story concert hall, 76 by 150 feet in size; cost \$35,000.

Architects J. M. Van Osdell & Co.: For Mrs. La Berg, on Madison street, near Halsted, a five-story store and flat building, 23 by 80 feet; cost \$18,000. The front will be of granite and terra cotta, with handsome terra cotta bays. Will put in steam heat, mosaic and tile floors, etc.

Architects Faber & Pagels: For Mrs. Meidenbauer, a three-story store and hall; cost \$15,000. Bedford stone, steam heat, etc.

Architect Clinton J. Warren: For Batchelder et al, Lexington Hotel, corner of Michigan avenue and Twenty-second street. Ten stories, 200 by 150 feet in size; cost \$600,000. The contract is let to Wells Bros.

Architects Lamson & Newman: For T. F. Kennedy, a three-story flat building, 25 by 76 feet; cost \$12,000. Stone front, steam heat, electric light, etc. For C. M. Staiger, at 712 Fullerton avenue, a two-story residence of Bedford stone front, steam heat, etc.

Architect L. J. Schaub: For Peter Mueller, at 686 to 688 West North avenue, a three-story store and flats, 40 by 88 feet, to be of pressed brick and Portage stone; cost \$20,000. For A. Klingel, corner of Robey & Greenwich streets, a three-story store and flat building of St. Louis pressed brick and Portage stone. For August Ortleit, on Center avenue and Indiana street, a four-story store and flat building, 45 by 70 feet; cost \$18,000. La Salle pressed brick and brownstone front, steam heat, etc.

Architect Julius Speyer: For A. Harper, on northwest corner Van Buren street and California avenue, a four-story flat building, 28 by 100 feet; cost \$20,000.

Architect George H. Borst: For Miles H. Carr, on Paulina street, near Cuyler street, a two-story frame residence, stone basement, furnace, etc. For M. F. Kellogg, on Oak avenue, near Thirty-sixth street, a three-story flat building; of pressed brick and stone front; cost \$10,000.

Architects Kley & Lang: For Mr. Ludolph, a four-story building, to contain stores, flats and lodge rooms; it will have a Bedford stone front and cost \$18,000. For Bernard Boedeker, on Chicago avenue, near Ashland avenue, a four-story store and flat building, 25 by 86 feet, to be of St. Louis pressed brick and Bedford stone. For B. F. Boedeker, at 36 Vernon Park Place, a three-story flat building, of buff Bedford stone front.

Architects Treat & Foltz: For J. G. Garibaldi, on Rush street and Walton place, a four-story apartment house, 112 feet front by 54 feet deep; cost \$45,000; the front will be of buff Bedford stone. For W. C. Goudy, a five-story addition

to Lincoln Park Sanitarium, on Deming court and Park avenue; stone front, hardwood finish, steam heat, electric light; cost \$35,000. For Mrs. Harris, a two-story addition to City Hotel, Sixteenth and State streets; to be of pressed brick and stone; size 63 by 123 feet, and cost \$25,000. They also made plans for a four-story addition to Kemper Hall, Kenosha, Wisconsin; pressed brick and stone, hardwood interior, steam heat.

Architects Flanders & Zimmerman: For J. G. Stevenson, corner of Sixty-third street and Sheridan avenue, a seven-story hotel, 200 by 143 feet in size, to be of pressed brick, stone and terra cotta, have steam heat, electric light, elevators, etc.; cost \$250,000.

Architect H. B. Wheelock: Made plans for rebuilding Emanuel Baptist Church, which was destroyed by fire last May; he will make extensive alterations and additions, and the expenditure will be about \$30,000. For Hollett & Tinsman, at 6110 and 6112 Wentworth avenue, a three-story store and flat building, 40 by 70 feet; cost \$16,000; brown pressed brick and Bedford stone.

Architect C. M. Almqvist: For Charles Julian, a three-story flat building, 25 by 70 feet in size, of pressed brick and stone, steam heat, etc. For M. Butler, on West Washington street, a four-story flat building, of pressed brick and stone, size 132 by 88 feet; to cost \$50,000. For I. N. Sandberg, on Dearborn avenue, between Division and Goethe, a handsome three-story residence of blue Bedford stone; to cost \$15,000. For Fred H. Atwood, on Belmont avenue, a three-story flat building, of pressed brick and stone.

Architect Henry Ives Cobb: For George W. Cass, 2713 Michigan avenue, a three-story residence, 40 by 90 feet in size, to be constructed of Bedford stone, slate roof and interior finished in mahogany, birdseye maple, quarter-sawn oak, mosaic floors, marble wainscoting, tile work, electric light, hot-water heating, etc.; cost \$80,000.

Architects Adler and Sullivan: For Illinois Central Railroad, at New Orleans, a handsome railway station 120 feet long, two stories high; to be constructed of pressed brick with stone trimmings and slate and gravel roof, interior to be finished in Southern pine. They also made plans for a four-story apartment house for Adolph & William Loeb, to be erected on the northeast corner of Randolph and Elizabeth streets; it will be 181 feet front by 46 feet deep and cost \$60,000; the first story will be of stone and above of pressed brick and stone; Victor Falkenau has the contract for all the work.

Architect, Henry Sierks: For Heissler & Junge, Thirty-ninth and Hopkins streets, a two-story bakery, 260 by 262 feet in size; to cost \$100,000; to be of common brick with slate and gravel roof, have steam heat, electric light, elevators, steam engine, two 200-horse-power boilers, etc.

Cincinnati, Ohio.—Reported by Mr. Lawrence Mcendenhall.

There are no new developments in the trade at the time of writing. The largest job on the market is the I. O. O. F. temple, and the bids are to be in by August 1. Work will soon be begun on the Alms Hotel, and, when finished, our city will gain two beautiful buildings. I think that it can be safely said that when the building season closes here, the total amount will exceed that of last year.

Architects S. Hannaford & Sons report: For Mr. J. H. Rhodes, a residence; materials, stone, slate roof, hardwood, stained glass, furnaces, grates, mantel, gas, plumbing, and modern improvements; cost \$25,000. For S. F. Dana (Campbell's Creek Coal Company), two houses; materials, pressed brick, stone trimmings, slate roof, hardwood, grates, mantels, furnaces, stained glass, etc.; cost \$26,000. For F. Alms, an apartment house, six stories high; materials, pressed brick, terra cotta, slate roof, elevators, stained glass, steam heat, tiling, mantels, plumbing, gas, etc.; cost \$100,000.

Architect G. W. Drach reports: For C. Hoppe, Cincinnati, a residence; materials, brick, stone trimmings, stained glass, slate roof, pine finish, furnace, mantels, plumbing, etc.; cost \$5,000. For Louis A. Roth, a residence; materials, brick, stone, slate roof, plate and stained glass, plumbing, gas, laundry fixtures, mantels, etc.; cost \$5,000.

Architect John H. Ball has drawn plans for a residence for Eugene Sweeney; materials, pressed brick, slate roof, hardwood mantels, furnace, grates, plumbing, stained glass, etc.; cost \$8,000.

Architects Baude & Kunz report: For Dr. Charles W. Woher, a residence; materials, pressed brick, slate roof, pine finish, furnace, gas, plumbing, stained glass, etc.; cost \$6,500.

Architect S. S. Godley reports: For J. W. Iredell, Jr., a residence; materials, stone, brick, hardwood, slate roof, gas, plumbing, stained glass, furnace, etc.; cost \$8,000.

Architect J. J. Rueckert reports: For Mrs. Holz, a residence; materials, pressed brick, hardwood, slate roof, furnace, gas, plumbing, stained glass, mantels, etc.; cost \$5,500.

Architect Charles Diss reports: For John Goetz, a residence; materials, stone, pressed brick, hardwood, slate roof, furnace, grates, mantels, stained glass, etc.; cost \$15,000.

Architect Lucien Plympton reports: For Walter Fisher, 261 Walnut street, a residence; materials, stone, tile roof, hardwood, mantels, grates, furnace, stained glass, tiling, etc.; cost \$7,000.

Architect H. E. Siter reports: For the Board of Education, Cincinnati, two schoolhouses, as follows: for eighth district, a building three stories high; materials, brick, pressed and common; slate roof, furnaces, desks, blackboards, gas, etc.; cost \$25,000. For the twenty-ninth district, an edifice similar to the one above; cost \$50,000.

Architects Crapsey & Brown report as follows: For the Presbyterian Congregation, at Winchester, Kentucky, a church edifice; materials, brick and stone, slate roof, hardwood, furnaces, stained glass, pews, etc.; cost \$20,000.

Architects Aiken & Ketchum report as follows: Rebuilding pavilion for Cincinnati Hospital, designing interior woodwork, etc.; cost \$2,000. Also remodeling the auditorium in same building, and changing same into rooms for internes, and a library; cost \$18,000. For A. M. Allen, Glendale, Ohio, a frame dwelling; materials, frame, shingle roof, pine finish, plumbing, gas, etc.; cost \$7,000. For C. B. Oglesby, a store and apartment building at Middletown, Ohio; materials, brick and stone, iron, gas, plumbing, pine finish, tin roof; cost \$18,000.

Architects Des Jardins & Hayward have drawn plans for a school at Osgood, Indiana; materials, brick, slate roof, school furniture, blackboards, gas, etc.; cost \$8,000.

Detroit, Mich.—The following are reported from Detroit:

Architects Malcombson & Higginsbotham: For F. Bonenwett, a two-story brick store on Michigan avenue near Harrison street; cost \$6,000. For M. J. Erwin, Harbor Springs, Michigan, two-story frame dwelling, stone basement; cost \$5,000.

Architects Hess & Roseman: For B'nai Israel Synagogue (projected), edifice on Mullsett street, near Hastings street; brick with buff stone trimmings, slate roof, etc.; cost \$12,000. For F. Schmidt, three-story brick store and flat building; cost \$10,000.

Architects John Scott & Co.: For Michigan Stove Company, one-story office addition, 49 by 169 feet; cost \$15,000.

Architects Donaldson & Wier: For John P. Huckenstein, two-story brick residence on Congress street near St. Aubin street; cost \$5,500. For M. Hardin & Co., three-story foundry building, 40 by 105 feet, on McComb near Brush street; cost \$10,000.

Architect Peter Deidricks: For Alphonse Posselins, four-story factory building on Gratiot avenue, near Antietam street; cost \$15,000.

Architect E. E. Meyers: For Cooper Memorial Presbyterian Society, addition to front of present structure; cost \$5,000 (projected). For Col. A. M. Payne, Yazoo, Mississippi; a two-story frame residence; cost \$5,000.

Architect J. G. McLean: For Dr. G. A. McSavimid, Windsor, Ontario; two-story brick residence; cost \$5,000.

Architects Rogers & McFarlane: For the Bagley estate; six-story factory building, corner of Congress and Randolph streets; cost \$30,000.

Architects E. A. Walsh & Son: For Mrs. M. Meyers; two-and-a-half-story brick residence, on northeast corner of Abbott and Trumbull avenues; cost \$6,000.

Architects A. C. Varney & Co.: For J. W. Dailey; three-story store and flat building, on Michigan avenue, near First street; cost \$5,500. For Beals & Selkirk, Wyandotte, Michigan; three-story trunk factory; size 50 by 180 feet; brick; cost \$15,000. For Mrs. W. Robinson; two-story brick residence; Columbia, between John R. and Brush streets; cost \$5,500.

Architect Gordon W. Lloyd: For Hugh McMillan, eight-story office building, north-east corner of Washington avenue and Clifford street; pressed brick,

brownstone trimmings; cost \$200,000. For Women's Hospital and Foundlings' Home (projected), three-story brick, 65 by 136 feet, on Thirteenth street and Grand River avenue; cost \$50,000.

Louisville, Ky.—Architects Drach & Thomas report: School building alterations, Fourth Ward school, Preston and Walnut streets; cost \$11,000. Hotel, Ninth and Main streets; \$15,000; five stories, 30 by 175 feet; pressed brick and stone. For Mr. J. Brannin, block of seven single residences for James S. Pirtle, First and Ormsby avenue; cost \$52,500; brick and stone trimmings, 30 by 55 feet, steam heating, not let. Alterations and additions to Mr. John Daehrer's residence, Twentieth and Jefferson streets; cost \$8,000; stone front, slate roof, steam heating, size 30 by 70 feet; let to John Mitchell, contractor. Residence for Mr. Norton; cost \$12,000; stone front, slate roof, steam heat, size 40 by 55 feet; location, Madisonville, Ky. Alterations and addition to Mr. Mike Muldoon's residence; \$7,500; located on New Broadway; building not let.

Architect B. Frank Peixotto reports the following: St. James Casino, for Victoria Land Company; location St. James Court; cost \$7,000; brick and stone, 60 by 30 feet, slate roof. Empire Hospital improvements, addition to Sisters' dwelling, new chapel, new foundations to main building, material frame and brick, foundations stone, metal roof; cost has not been estimated.

Architects Manrey & Dodd report the following: Residence, J. A. Flexner; \$6,000; 30 by 45 feet, three stories, brick and stone; location Sixth and Ormsby avenue. Residence, Mrs. William Cornwall, Jr., 25 by 60 feet, two and one-half stories; \$6,500; brick and stone, slate roof; location Ormsby, between Fifth and Sixth streets. Residence, Mr. Benjamin Flexner, 32 by 44 feet, three stories, brick and stone; cost \$6,000; location Sixth and Ormsby avenue. Residence, Dr. Joseph Mathews, Fourth near York, 40 by 60, two and one-half stories; cost \$10,000; brick and terra cotta, slate roof. Residence, Mrs. Quigley, Fourth and Weissinger avenue, size 30 by 60 feet, three stories, brick and stone, metal roof; cost \$10,500.

Rochester, N. Y.—Architects Nolan, Nolan & Stern have prepared plans for Public School No. 10, for the city of Rochester, two stories, 100 by 150 feet; to contain sixteen schoolrooms, and a large lecture room in third story, to be of brick, trimmed with stone and terra cotta, slate roof; when completed will cost about \$45,000. Also, just completed plans for a hospital building, to be built at Newark, New York, for the New York State Custodial Asylum. The main building will be two stories high, with a tower; the wards will be in a semi-detached circular building, 50 feet in diameter; one 12 feet story; all of brick, tin roof; to cost about \$20,000.

Architects Jay Fay & O. W. Dryer have made designs for a residence to be built on East avenue, for Miss J. Brown; first story of stone, second story "half-timbered," the interior will be finished in hardwoods, the plumbing will be first-class in all respects; furnace heat; to cost \$10,000. Also, for Mr. H. E. Boardman, a double house; first story of field-stone and brick, second of frame; tile roof, plate glass, heated by furnace, interior finish of oak; cost about \$8,000. Also, designs nearly complete for a new drill hall for the New York State Industrial School; 100 by 300 feet, built of stone, thoroughly lighted with skylights and glass front; trussed roof, covered with tin; to cost about \$25,000. For Mr. W. R. Chelice, a block of three stores and four flats, three stories high, 50 by 60 feet; buff brick, stone trimmings, copper cornice; cost \$10,000.

Architects Block & Barnes have designed a residence for Mrs. C. Will, stone and frame, interior finished in hardwoods, stained glass; cost about \$14,000. For Mr. William Karges, a three-story brick block of stores and flats; electric work, plumbing, tin roof; cost \$12,000. For the New York State Industrial School an extension, to be used for dormitory; also a lavatory for the Primary Department, to contain the best special plumbing for public buildings; each to cost about \$10,000. For Ambrose Wood, Esq., a frame residence, to be built on Staten Island, New York; to have fine hardwood interior; cost \$16,000.

Seattle, Wash.—Architect John Parkinson: For the Seattle School Board, a two-story addition to the Denny School, size 60 by 80 feet; cost \$30,000. Also a one-story addition to the Mercer School, size 40 by 80 feet; cost \$7,500. For the Columbia School Board, a two-story school, 72 by 62 feet; cost \$8,000. For John Watson, a two-story residence, size 32 by 50 feet; cost \$5,000.

Springfield, Ill.—Architect George H. Helmle: For Col. J. H. Barkley, two frame cottages, size 28 by 42 feet, seven rooms; cost \$3,000. For H. B. Chicken, two-story frame dwelling, size 30 by 48 feet, eight rooms, wood mantels, stained glass, furnace, etc.; cost \$3,200. For J. M. Taylor, Taylorville, Illinois, two-story frame dwelling, ten rooms, furnace, wood mantels, plumbing and stained glass; cost \$5,000. For Hon. J. S. Lyman, Farmingdale, Illinois, two-story nine-room dwelling, 44 by 48 feet, furnace and wood mantels; cost \$4,000. For H. Taft, Rochester, Illinois, two-story frame dwelling, eight rooms, size 28 by 44 feet; cost \$2,500.

St. Paul, Minn.—Architect C. A. Wallingford: For a four-story double building, stores and apartments, on Fourth street, near Exchange; materials to be brown stone and pressed brick, with private halls, steam heat, gas stoves, dumb waiters, baths, electric bells, speaking tubes, etc. The contract price is \$51,000. For C. A. Bettinger, a residence, on Ashland avenue near Grotto; to cost \$2,500. For Dr. J. M. Welch, a row of three three-story houses, on Holly avenue near Kent; to be of brown stone, ten rooms each, with all conveniences.

Architects Herman Kretz & Co.: For St. John's German Lutheran church congregation; brick and stone church, corner Margaret and Hope streets; \$60,000. Catholic church, Glencoe, Minn., of brick and stone; to cost \$18,000. Frame priest-house, Glencoe; \$4,000. Catholic church at Little Falls, Minneapolis, of brick and stone; \$22,000. For C. B. Gardner, row of seven brick and stone houses, corner McBoal and Leach streets; \$20,000. For the Sisters of St. Joseph; academy, corner Cleveland avenue and Rondo street; of brick and stone; \$150,000. Work has been commenced on this. For Defiel and Zimmermann, four brick and stone houses, corner Pleasant avenue and Chestnut streets; \$20,000. For W. L. Gaston, block of brick and stone stores, corner Rice and Milford; \$6,000. For C. F. Arrol, block of stores and flats on South Robert street; of brick and stone; \$30,000; also a block on Marshall and Dale streets; to cost \$25,000.

Architects Omeyer and Thorl: For W. J. Anderson, West Superior, Wisconsin, two-story frame store; to cost \$5,000. For Peter Rothausen, West St. Paul; double frame house; \$5,000. For Charles J. Johnson, West Superior; three-story brick and stone block of stores and offices; \$20,000. For Dr. A. H. Mitchell, Deer Lodge, Montana, two and one-half-story residence; brick and frame; \$20,000. For Theo. C. Sivenson, West Superior, double frame house; to cost \$5,500. For Mumbson & Larson, West Superior, two-story brick row of stores and tenements; \$8,000. For Ole Ask, St. Paul; brick veneer flat; \$5,500. For William Coleman, Deer Lodge; brick veneer residence; \$8,500. For Farmers' State bank, Madelia, Minnesota, bank, store and office building; of brick; to cost \$8,000.

Architect John H. Coxhead has plans prepared for a \$30,000 college building at Charles City, Iowa; also for a \$40,000 college building at Wahpeton, Iowa; both buildings to be of brick with granite trimmings, finished in oak, with all conveniences. For M. Treacy, St. Paul; brick residence on Dayton's Bluff; to be built of brick with brown stone trimmings, hardwood finish. Also plans for frame residence at Highwood; with hardwood floors and finish; to cost \$5,000.

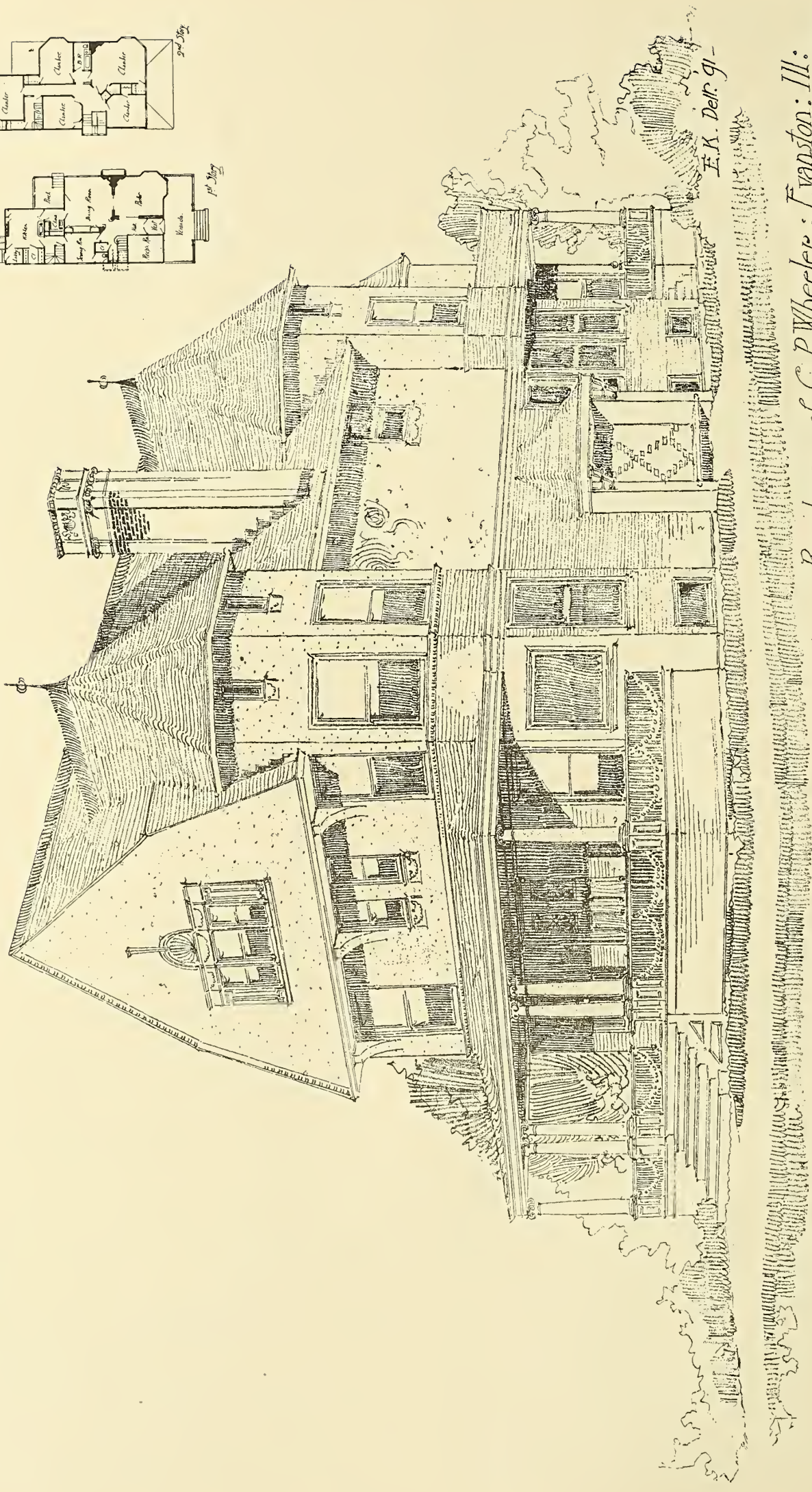
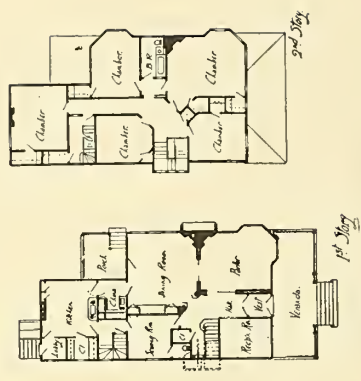
Architects Gilbert & Taylor: For First German M. E. Church on Olive street; to be built of stone; at a cost of \$35,000. Also Club stables on Summit avenue, near Dale; of stone and brick; cost \$6,500. For the Great Northern Railway company; stone depot at Grand Forks, North Dakota; to cost about \$50,000; also stone and brick depots at Anoka and Willmar, Minnesota; to be expensive and first-class in every way.

Architect E. P. Bassford: For State of Minnesota; deaf and dumb asylum at Faribault; \$75,000. Also Catholic cathedral at Fargo, North Dakota; to cost \$60,000. For First National bank, Stevens Point, Wisconsin; bank and office building of brick; to cost \$30,000. For M. W. Topping, St. Paul, Minnesota; private residence on Summit avenue; to cost \$15,000. For Michael Doran; private residence on Summit avenue; \$15,000.

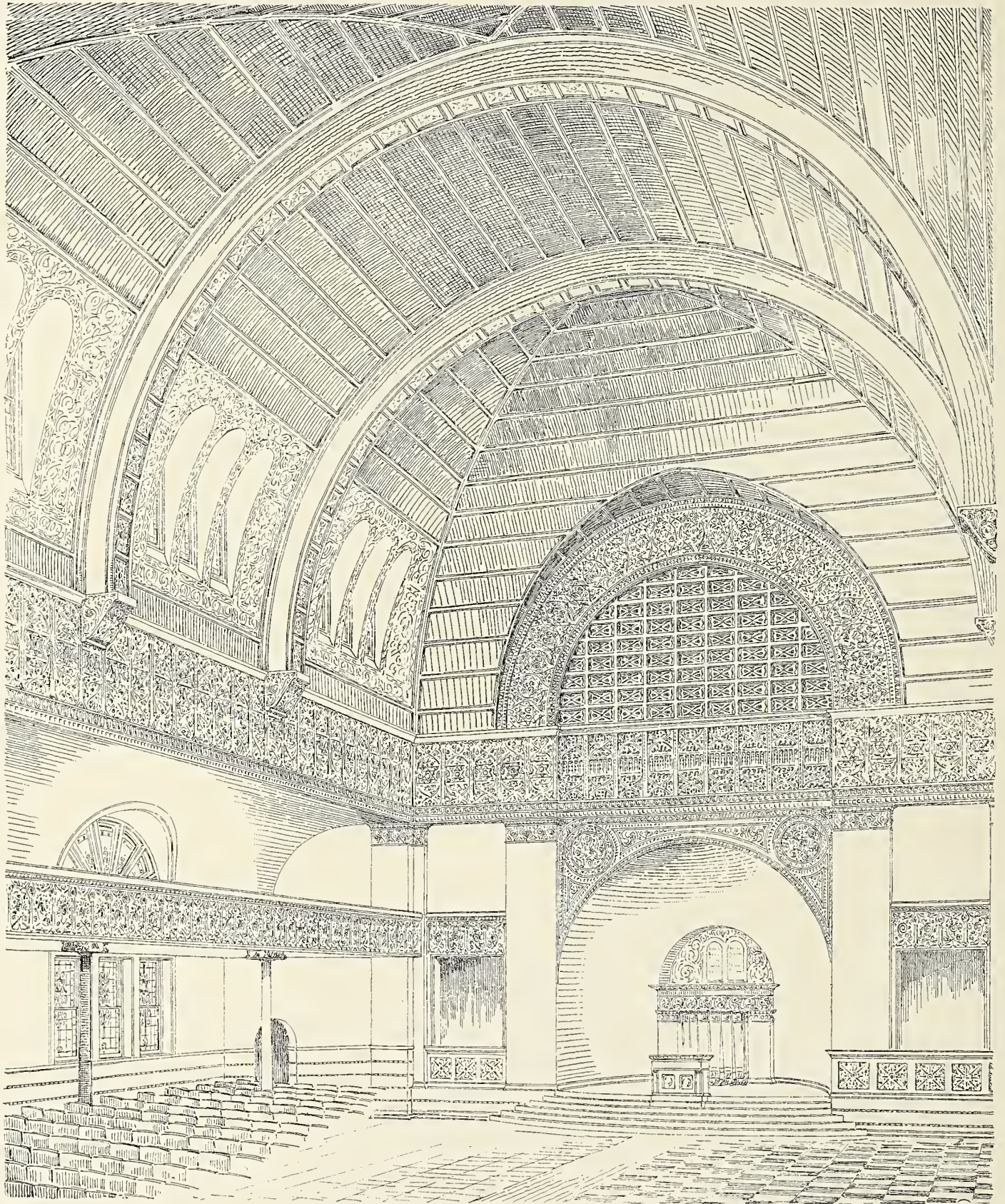
Architect Albert Zschocke: For St. Paul White Lead and Oil Company; brick factory on the West side; to cost \$15,000. For Wabasha county, Minnesota; stone court house; to cost \$50,000.

Architects Millard & Joy are drawing plans for private residences for Col. C. B. Lamborn on Dayton avenue, and J. G. Hinkle, Union Park.

Zacatecas, Mexico.—Architect George E. King, of El Paso, Texas: For Fernando M. de Prez, opera house, thoroughly fire-proofed. Seven carloads of this material from the Pioneer Fireproof Construction Company will be used in its construction.



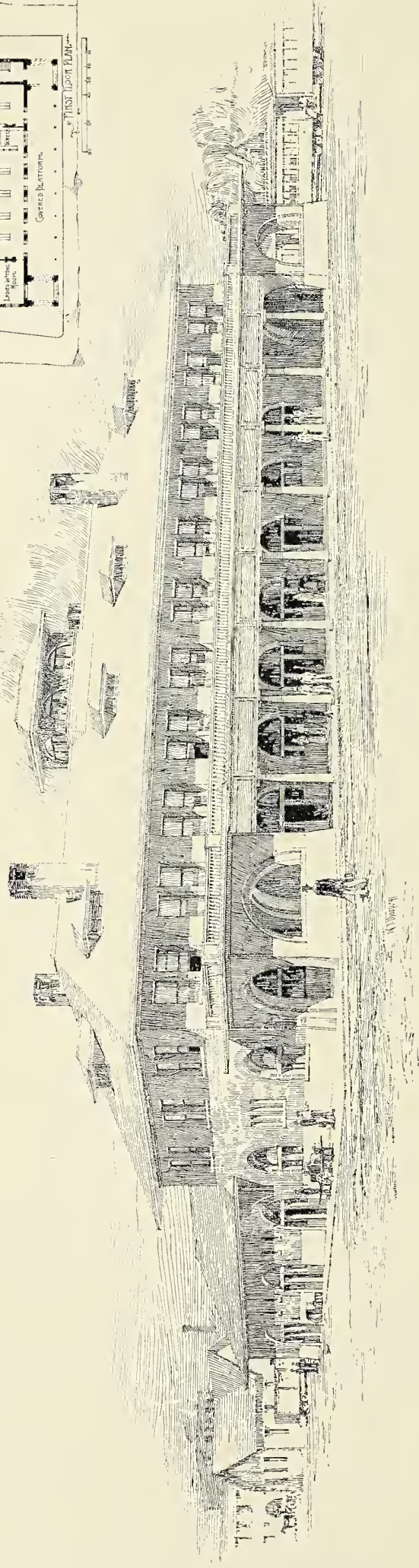
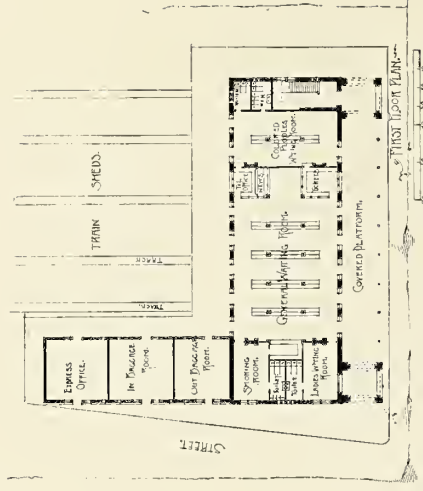
: Residence of C. P. Wheeler : Evanston : Ill. :
Frederick Bauman & J. K. Cady. Architects -



INTERIOR VIEW, SYNAGOGUE, CHICAGO, ILLINOIS.

ADLER & SULLIVAN, ARCHITECTS.

NEW ORLEANS PASSENGER STATION.
ILL. CENTRAL R.R.
Adler and Sullivan, Architects.
Chicago.



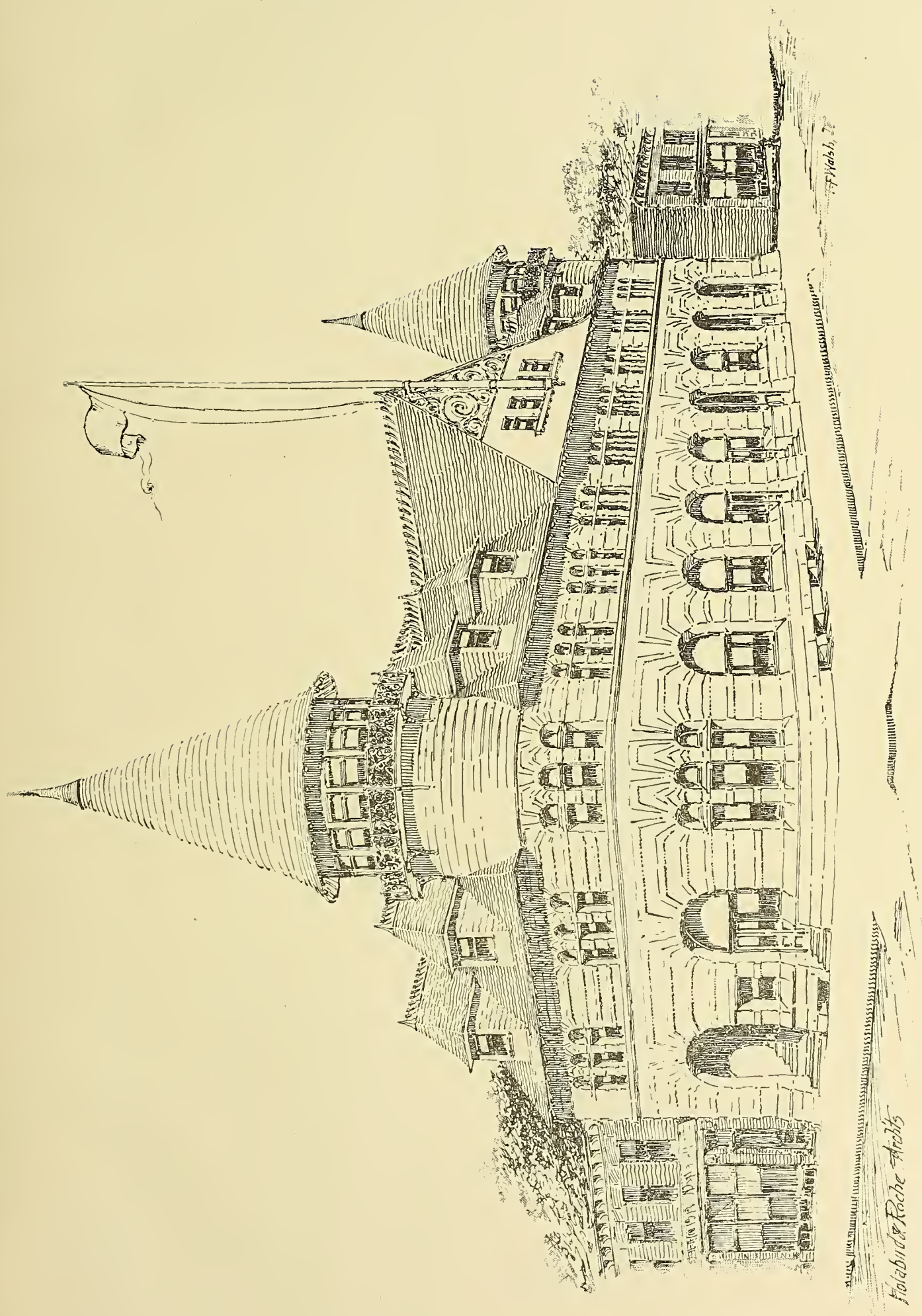


RESIDENCE FOR MR. JAMES GRANNLEY, CHICAGO.
APPLEY AND JULLIVANT, ARCHITECTS.



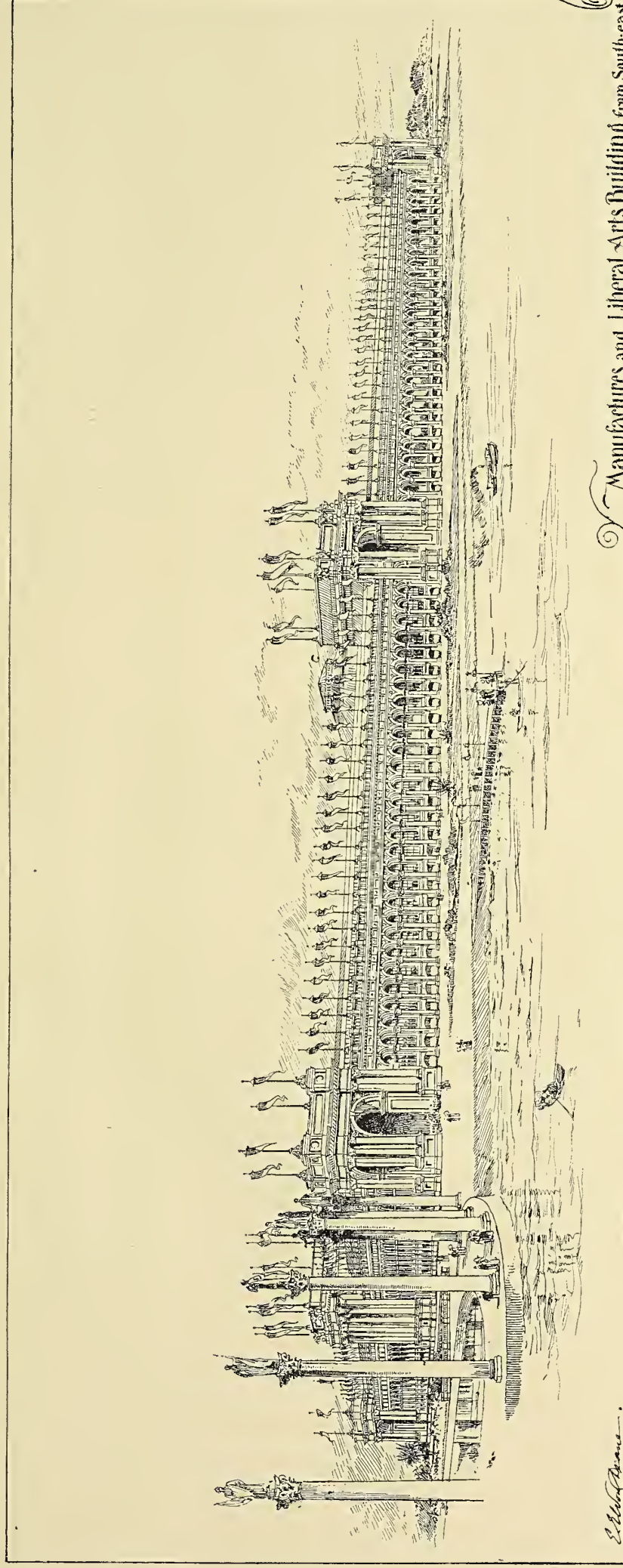
THE VENETIAN OFFICE BUILDING, CHICAGO.

HOLABIRD & ROCHE, ARCHITECTS.



VILLAGE HALL, EVANSTON, ILLINOIS.

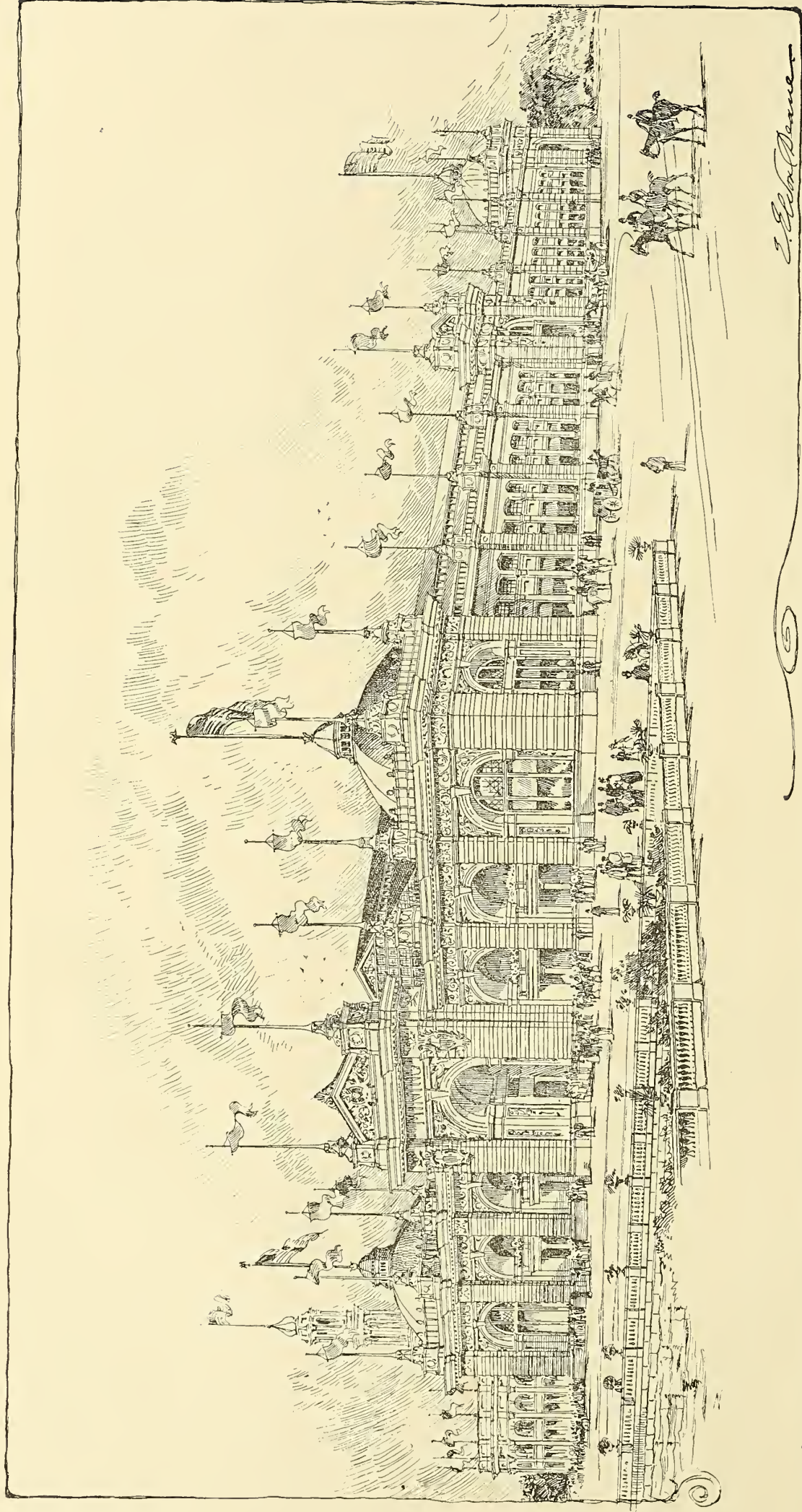
HOLABIRD & ROCHE, ARCHITECTS, CHICAGO.



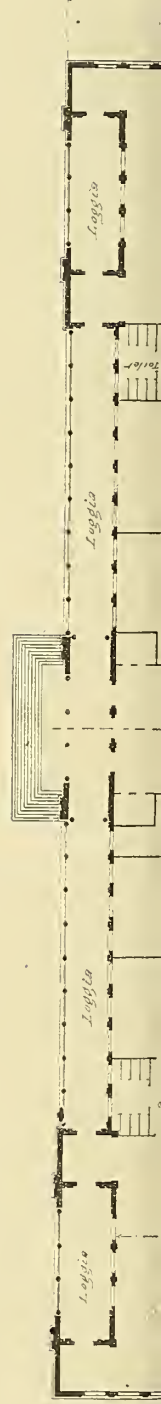
Manufactures and Liberal Arts Building from South-east.

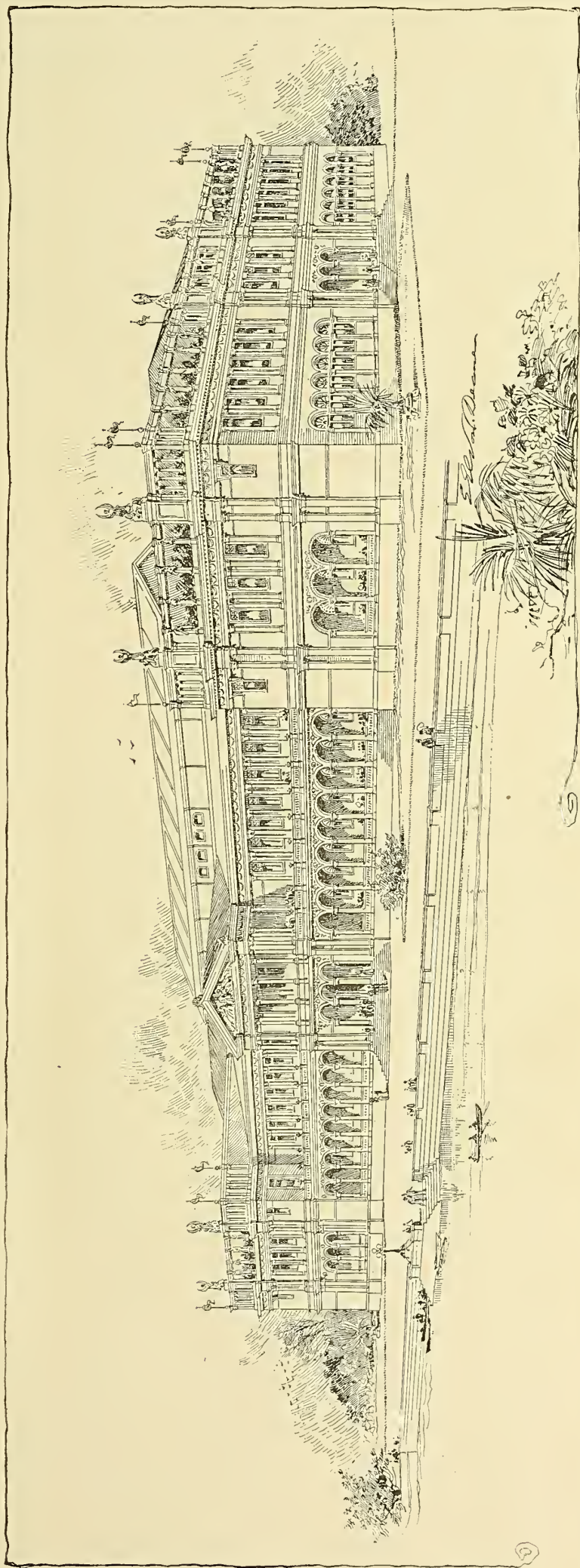
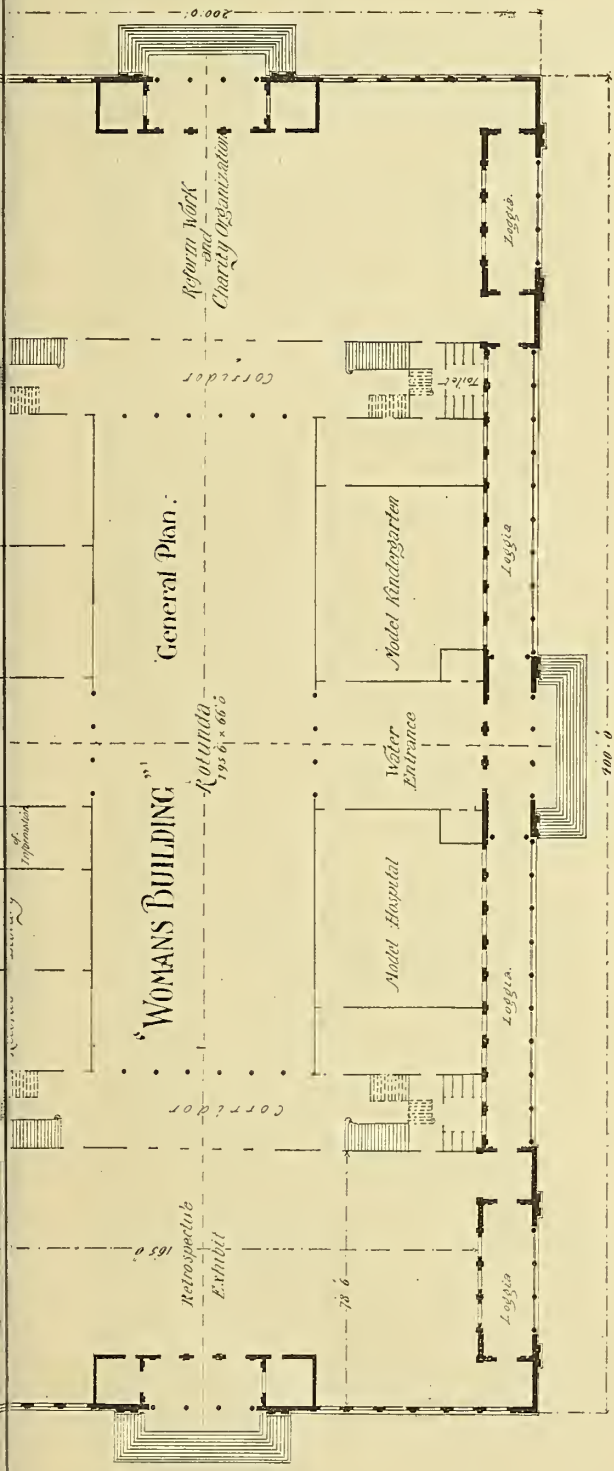
MANUFACTURES AND LIBERAL ARTS BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, AUGUST, 1891.

GEORGE B. POST, ARCHITECT, NEW YORK.



PERSPECTIVE VIEW, MINES AND MINING BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.—DEPARTMENT OF CONSTRUCTION, AUGUST, 1891.
S. S. BEMAN, ARCHITECT, CHICAGO.





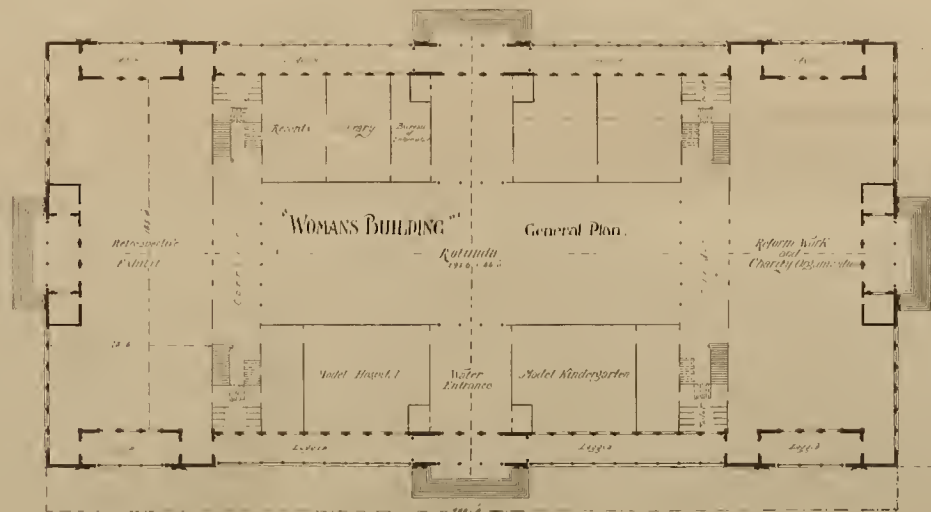
PERSPECTIVE VIEW AND PLAN, WOMAN'S BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.—DEPARTMENT OF CONSTRUCTION, AUGUST, 1891.

MISS SOPHIA G. HAYDEN, ARCHITECT, BOSTON.



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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

SEPTEMBER, 1891.

No. 2

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to
ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photogravures), 75c. Intermediate number, 10c. Advance payment required.

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The Annual
Convention
of the
A. I. A.

October 28, 29 and 30, are the days decided upon for the annual convention of the American Institute of Architects at Boston. As soon as arrangements are completed for transportation and hotel charges, etc., information will be sent to the members. In the work to be taken up by the convention will be the final settlement of the relations of the Institute to the Chapters and vice versa. It will also be necessary that there be some change in the regulations governing the admission to Fellowship in the Institute of non-members of Chapters residing at a distance from existing Chapters. The regulation as to the formation of new Chapters also requires recasting into more definite form. In another column we publish the circular issued by the Boston Society of Architects and the Boston Architectural Club, who are jointly organizing an exhibit of drawings to be held in connection with the convention, and a large collection of unusually meritorious drawings is confidently expected. This, with the fact that Boston and vicinity are rich in interesting examples of architecture, will draw together a large number of Institute members.

Criticism of
Current
Architectural
Work.

We have often regretted the lack of intelligent, reasoned and disinterested criticism of current architectural work through some medium accessible both to the public and to the architect. It has not seemed advisable to make comments upon illustrations of current work which we ourselves publish, and the criticism of the newspaper press is too disorganized and often too unenlightened to be of the most effective service. There has just appeared the first issue of the *Architectural Review*, a quarterly published in New York, but drawing its contents from both hemispheres, in which we hope to find just that careful and scholarly criticism by both architects and laymen that is needed for the education of the public and the support—and truly also the pruning—of the architects themselves. We like the ring of the introductory salutation, which in spite of some vague rhetoric, promises the right attitude and purpose. There are some incongruities—the fiction attachment reminding of the chromo with every pair of trousers, and “Primus” runs some danger of being carried off his feet by the flow of his own will—but we heartily welcome this venture and hope that it will find the immediate support that will enable it to rise superior to all temporary incongruities and defects. It has a wide and inviting field.

Fresh-Air
Inlets
to
House Sewers.

Mr. L. D. Hasford, of New York, states (see *Sanitary News* of August 15) that during a recent tour of inspection of fresh-air inlets to house sewers in New York he found so many stopped with refuse as to warrant the conclusion that eighty per cent were practically air-tight and inoperative. As to the remainder he makes the obvious point that, when operative, every considerable rush of water drives before it air from the sewer to be breathed by passers by, carrying germs of disease if people in the house are suffering from any infectious malady. Where stone sidewalks extend continuously from curb to house wall the type of inlet common in New York is very unsatisfactory and the common Chicago type, to be better, must be a stumbling block. There is no insuperable difficulty in most cases in so placing

the fresh-air inlet that it will not be subject to stoppage by the ordinary street refuse. The prevention of the second undeniable evil common to all systems of inlets now in vogue is a more difficult matter. Mr. Hasford in the same article recommends a form that he thinks will obviate any outward rush of air, the inlet being placed above grade detached by some little intervening space from the running trap, and so cross-connected that the tendency shall be to drive the air which is collected ahead of a rush of water back to the pipes to the roof—a strong down draft being prevented by some form of ventilating cap. In the September issue of the *Sanitary News*, Mr. Gerhard, of St. Cloud, Minnesota, combats this scheme and asserts that the line of least resistance will still be toward the nearer outlet, namely, by the fresh-air inlet. We confess that it appears to us quite probable that in the face of an established following-down current the preceding advanced column will, as Mr. Gerhard asserts, find its easiest outlet at the inlet in spite of the direction sought to be imparted to the air current by the angle of cross-connection. The subject is of great importance and we hope that further reasoning coupled with practical demonstration will be brought to bear on the difficulty. In any case it is usually quite within the power of the architect and plumber to render improbable the stoppage of the inlet with refuse.

The Faulty Construction of the Shoreham.

Mr. Howard J. Fleming, architect, Washington, D. C., sends us a report signed by architect James H. Windrim, engineer Bernard R. Green and inspector Thomas B. Entwistle, explaining the fall of floors in the Shoreham apartment house in Washington last April, till then supposed to be a very substantial building, and describing the method of restoration employed by direction of Mr. Fleming. According to this report the original construction must have been faulty in the extreme, the most inferior quality of lumber having been selected for the joists, laid in some cases without bridging, and filled between with ceiling blocks of plaster and ashes, covered by a layer of damp ashes and other rubbish, on which was nailed a wooden floor in some places and in others a floor of marble slabs. The building was about two years' old when the floors began to fall, for no reason but inherent inability to hold their own weight any longer.

The Theory of the Decay of the Shoreham Joists.

It appears that the joists under the wooden floors were in fair condition despite the sap and the worthlessness of the lumber, the ceiling blocks and the damp ashes; but under the marble tiling the wood had apparently turned into ashes by some process which is not explained. With a trace of inconsistency the report ascribes this in part to the water which "seeped through the joists of the tiling," whenever it was washed, and partly to the air-tight quality of the same tiling. It appears that a microscopist was employed to examine the decayed joists and that he discovered no traces of the dry rot fungus. The report says that the fibres and wood were "quite perfect," but had lost all strength. We regret that no one seems to have thought to call in a chemist to examine the wood. The chemical theory offered by the committee that the sappy pine was "*dehydrated*" by the damp ashes does not commend itself as scientifically probable, nor can we quite concur in the hopeful conclusion, "We, therefore, feel

doubly sure that the incipient action noted in some of the apartment floor joists, from which the ashes have been thoroughly and permanently removed, cannot now proceed any farther." This is a case where a thorough investigation by scientific experts might have disclosed valuable information on the rapid decay of timber, and it is much to be regretted that the opportunity was not so utilized.

Inspection Does Not Protect.

While Americans are proverbially quick to grasp a new idea, occasionally they display an obtuseness which might be ludicrous were it not serious. A conspicuous illustration is the constancy with which they hold the belief that the sure remedy for a new building accident like that of the Taylor building in New York is to add another string of amendments to the building law and give the inspectors a new prodding. The general subject of building laws is more fully treated in another column. The disaster to the Taylor building and that to the Shoreham apartment house, also discussed elsewhere in this issue, are illustrations of the principle there laid down that inspection does not protect, and cannot.

How to Enforce Building Laws.

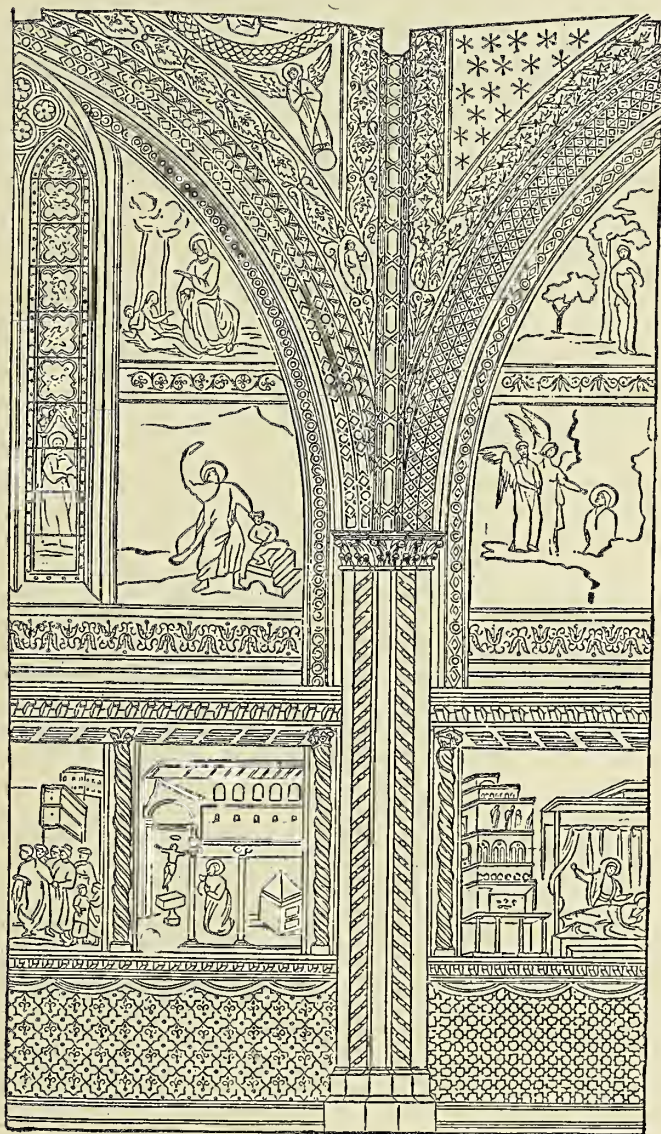
It is probable that a building ordinance of a broad and general character may be indispensable in cities and wherever else dangerous construction is to be feared. Whether it should not be a state regulation, uniform throughout an entire commonwealth, instead of a municipal enactment varying from one city to another and liable to change or entire abrogation by any board of aldermen, is a question worth noting. But such laws must serve mainly as a guide to those who wish to build properly, and as a basis for legal proceedings against the careless, reckless and ignorant. The enforcement of safe building can be done only by making owners, architects and contractors civilly and criminally liable for accidents which result from a violation of the principles of sound construction broadly laid down in a general building act. A few prosecutions of this nature vigorously carried out would do more for public safety as to dangerous building than any number of inspectors it would be possible to employ, and would, besides, create a most healthy public sentiment on the subject.

Employment of Engineers in Architecture.

This suggests the question to architects, "Whither are we drifting?" Hitherto we have insisted that an architect's first duty was to plan skilfully, then to build safely, and finally to do it all gracefully and grammatically. Is this no longer possible? Must we now advance backward to the idea, long since overcome, that an architect is only an ornamental gentleman, to put beauty upon a building, deck it out in some fashionable style, etc., but not practical enough to be trusted with its constructive details? There is no apparent reason why a busy architect should not employ a civil engineer to design construction just as he employs a specialist to write specifications, and another to work out ornamental details, etc., all under his oversight and direction and in his own office. It is quite a different thing to intermit work on a design until it has been sent to an engineering firm to have its construction planned and figured so that it can be erected safely. Should the latter practice become general, a loss of prestige to the architectural profession cannot fail to result.

Architecture and the Allied Arts.

BY BARR FERREE, LECTURER IN THE SCHOOL OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA.



DECORATION IN CHURCH OF S. FRANCESCO, ASSISI.

PART IV.

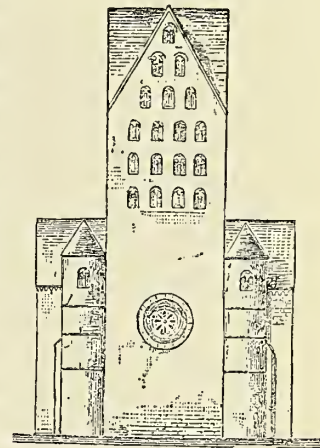
MEDIÆVAL.

EARLY Romanesque buildings give small intimation of the wonderful development architecture was to undergo in the middle ages. The people were too poor, their industrial and artistic methods too cumbersome and too crude to permit of more than the simplest architecture. All of this work had a certain grandeur, but the walls are bare and the carving sparse and rude. Architecture was passing through the early stages of an evolution, and in no respect was this more striking than in the limited use of the allied arts. With the founding of the great religious societies and the general feeling of relief when the world had passed the limit of 1,000 years after the birth of Christ, a gradual improvement ensued. No one element in the history of the middle ages so powerfully helped the growth of art as the religious societies, with the opportunities they offered for the preservation of culture. Never was architecture the subject of such loving care as was displayed by the monks and brothers, and to them we owe not only much that is of literary value, but also the practice of art for art's sake. The influence of these bodies was felt in all departments of culture, and in none was it exercised to greater advantage than in the development of art, of architecture, of painting and of sculpture.

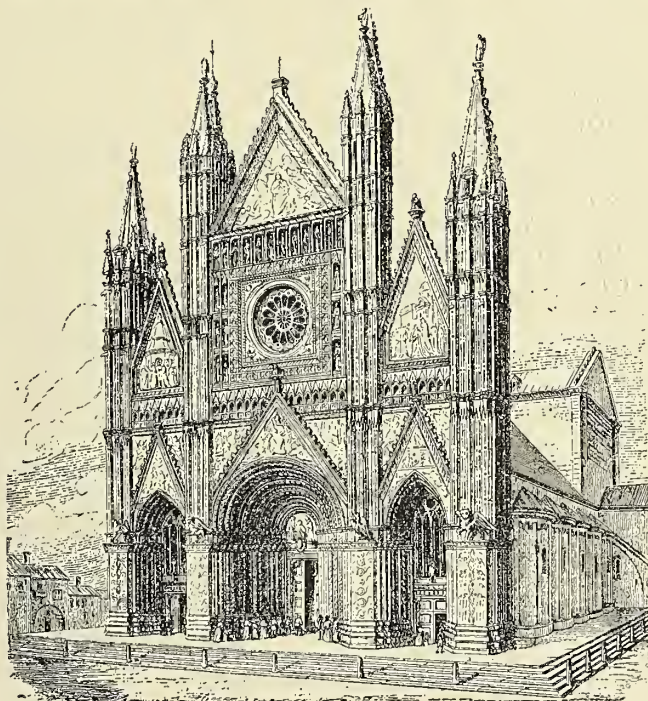
The darkness that enveloped the dark ages was never so dense as to completely hinder the march of progress. The age was one in which culture was almost wanting, but it contained the germs of a great after-development. No art received so much attention as architecture; through it the slumbering genius of the people was awakened. At a time when industrial progress was slow it made very considerable advancement, and could exhibit monuments of great beauty and size. Plain and severe as many buildings were in the

earlier mediæval period, it speedily absorbed other branches of art, and a Gothic cathedral became a storehouse of the culture of the time in which it was built. It was not only the finest architecture, but contained the best achievements in painting, sculpture and decoration that the knowledge and skill of the period permitted, and it is possible to write a sketch of the arts of the time from the records left in the cathedral churches of Europe. These great buildings were the center of the life of the town. The houses of the people were huddled together under their towering walls for shelter, and they formed not only the most important place of general assembly open to citizens of all grades and all classes, but frequently the only one. Under the shrewd and careful guidance of the clergy they became more than mere shelters for the sacred elements, more than simple rooms wherein the faithful could congregate, more than ordinary structures whose merits were measured solely by their usefulness, but they were vast storehouses wherein were gathered all the evidences of the culture of the period, where all could come and worship and study the most inspired works of man. They formed an incentive to better and greater work that was of the utmost value in furthering the progress of mankind and stimulating the incipient germs of genius.

For a long time people were too much occupied with providing the necessities of life to concern themselves with producing an ornamental architecture. Churches of the early Romanesque period are almost wanting in an intelligent application of the allied arts to architecture. Ornament of all kind is wanting, carving is rude and undeveloped, and if painting was employed to any extent it has long since disappeared. Whatever ornamental features the early churches of this time possessed is in the structure of their walls, in the arrangements of the stone or brick in some simple pattern, and other primitive devices. The church at Cravant, in France, the church of Vieux-Pont, the church of S. Christopher at Suèvres (Loir-et-Cher)



CATHEDRAL AT PADERBORN.

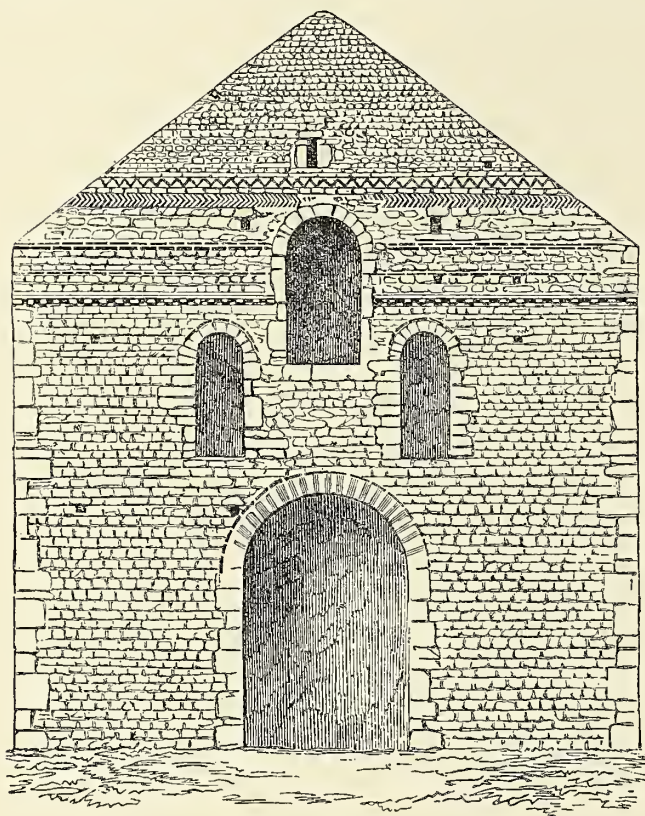


THE CATHEDRAL AT ORVIETO.

are very simple buildings ornamented in this manner. The term "ornament" is in fact scarcely a proper one to apply to them, but this elementary arrangement of stone and brick in simple designs or regular layers is an indication that the artistic spirit has not altogether been lost. Even with the poorest materials and the narrowest opportunities the builders of this remote time did what they could.

Before taking up in detail the development of the allied arts in architecture in the mediæval period, it may be well briefly to glance

at the development of the façade of the Christian church as illustrative of the varying part taken by the arts in the formation of architectural styles. The church of S. Christopher at Suèvres is one of the rudest and baldest designs in the history of art. The stone churches of central Syria contain many features in their façades



FACADE, CHURCH OF S. CHRISTOPHER, AT SUEVRES.

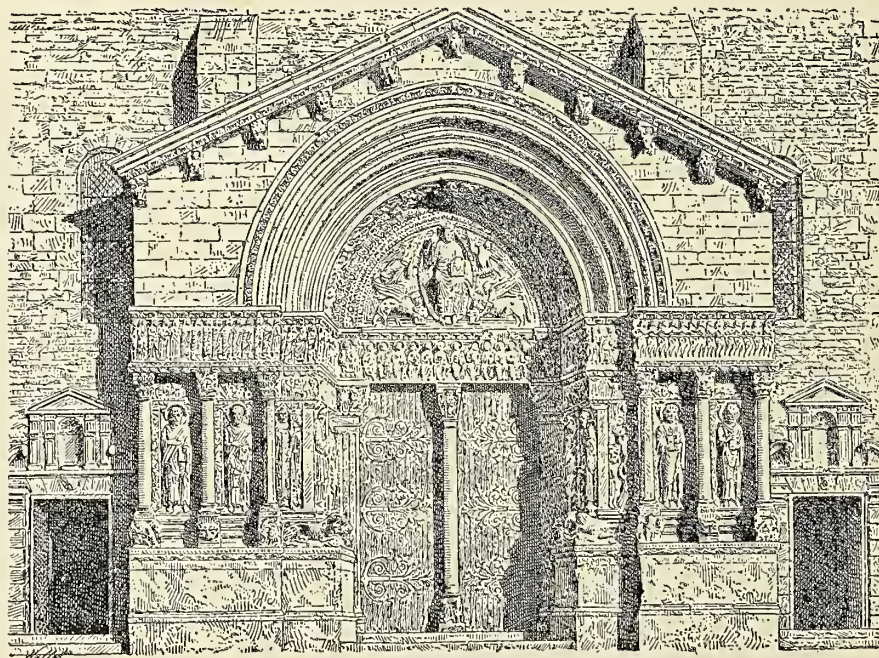
which give them an architectural character, but this French church is altogether deficient in artistic qualities. A round arched doorway, with three semicircular windows above, arranged one on a higher level than the other two, with a very small window in the gable, the wall consisting of stones regularly laid, relieved by a narrow cornice some little distance below the gable, whose solitary ornament is two rows of stones laid in the herring-bone fashion, do not form a façade of any dignity or merit. In this building ornament of all kind is reduced to a minimum, and the openings and the rough stonework alone tell the story. Even when ornament is introduced in these very early structures, borrowed from Roman buildings and having some value of its own, it is employed in a haphazard fashion without regard to its structural or artistic possibilities. The baptistery of Poitiers, the Basse-Euvre at Beauvais, and other buildings of the same period, are illustrations of this utter incompetence to use ornament and decoration in an intelligent manner.

Art, though apparently dead, was not lost, and the earliest indication of a revived art is found in the moldings ornamented with carvings of a special kind which at once became characteristic of various schools of architecture. Moldings, both ornamented and plain, are some of the most important means of identifying the dates of mediæval structures, certain kinds being employed at certain epochs and in certain districts, and often these relatively unimportant members are the sole means of identification at the disposal of the modern archæologist. One of the most important, because of its later development, as well as the most interesting and accurately marked of these early schools, is the Norman, with its characteristic zig-zag ornament. Bands of this decoration sometimes entirely surround the door opening, and at others is confined to the arch itself; but simple as this device is it gave the architects a new power and enabled them to give greater interest to their façades. Other French schools developed other forms of ornament which

was often quite complicated, and in the Burgundian, foliage and even animal forms are introduced.

The decorative features are chiefly confined to the openings, especially to the doorway, which is often recessed, with two or three arches one within another, ornamented with various designs and supported by columns with capitals and cornice. The church at Jory is a good illustration of what may be termed the second stage in the evolution of the façade. A recessed doorway supported by several columns forms the center of the façade. Above is a narrow round arched window with a column on either side. Two well marked buttresses support the central division, which is divided horizontally by string courses, and the whole is surmounted by a sharply pointed pediment. The aisles have inclined roofs and buttresses on the corners. A small window occupies the upper portion of their walls. More complicated is the façade of the church of Ouistreham (Calvados), which has three arcades richly ornamented with zig-zag ornaments above the deeply recessed door. The main portal of the church of S. Hilaire at Foussay (Deux-Sèvres) has a circle of sculptured figures, and a representation of the crucifixion is introduced under one of the arches on one side.

The later development of the Romanesque style in France is marked by a profusion of sculpture that is only exceeded in the Gothic period. This is especially the case with the doorways. Though this portion of the façade underwent very considerable modification, portals like that of S. Trophime, at Arles, the church of S. Gilles in Languedoc, the abbey church of Moissac, and others of the same epoch, mark the beginnings of the great doorways which became the chief glory of the French cathedrals. Space will not permit an extended study into the interesting subject of the development and evolution of the façade, for the Romanesque builders were unsettled in their ideas and often displayed a marked incompetency to properly manage the materials at their command. Even when a very tolerable proficiency in the production of ornament and sculpture was obtained there was an uncertainty in the method of its use. The façade of the church of Notre Dame at Poitiers, though ornamented with a profusion of sculpture, shows none of that beautiful intelligence in the arrangement of architectural parts and the proper use of sculpture to be noted in Gothic churches of the best period, and the façade of the cathedral of Angoulême is another illustration of the same fact. In both these churches there is no lack of ornament, but the manner in which it is applied deprives it of its full architectural value. Sculpture has not, in fact, yet taken its true place in architecture; it was an ornament, to be placed wherever the fancy of the artist



PORTAL, CHURCH OF S. TROPHIME, AT ARLES.

deemed best; it had no organic connection with the architecture.

In the German Romanesque churches there is a corresponding want of ornament. Whatever merit the larger German churches possess is obtained from their imposing proportions, not from any strictly ornamental features. Buildings like the abbey church of Laach, the cathedrals of Bonn and of Speier, have a massive dignity

and repose that is quite characteristic and which is derived not only from their great bulk but from the almost total absence of decorative features. High blank walls, broken only by narrow pilasters supporting arches or corbel-tables, are dignified and stately, but scarcely ornamental. The decorative features of these churches are therefore the capitals of the columns and the paintings with which the interior walls may have been ornamented. In later churches, of this epoch, the ornamental features are limited to much the same matter as in the earlier ones, to columns and external arcades. There is not the sculptural development to be noted in France.

(To be continued.)

The New York Building Laws.

MR. JOHN BEVERLEY ROBINSON has created a sensation by an article in the *Engineering Magazine* arraigning the time-honored building laws of New York; and in undertaking their defense, some of the Eastern journals intimate that Mr. Robinson is young and not practical, all of which appears to the writer irrelevant to the issue he has raised. Indeed, when innovations are to be made, and the "traditions of the elders" are to be overthrown, the iconoclast is much more apt to be a young man than an old one.

"By their fruits ye shall know them." The proper way to establish the value of the building laws of New York, as of any other city, is by an appeal to the records. Have these laws answered public expectation in preventing the erection of unsubstantial and unsanitary buildings? Have they stopped, or materially lessened the occurrence of building accidents? Have they proved no obstacle to the progress of invention and improvement in the materials, styles and processes of building? Have they been honestly and efficiently administered, without favoritism, without corruption, without criminal malfeasance in office? In short, have they been kept out of politics, and have they protected the public? What do the records show?

THE EXPEDIENCY OF BUILDING LAWS.

Upon the general question of the value of building laws, there have always been two opinions, as there have always been two sides. This is but a phase of the old controversy whether it is better to be governed too much or too little. The American principle is that the less government there is the better.

The writer considers Mr. Robinson entirely correct in directing attention to the disadvantages of building laws. They certainly tend to repress the spirit of invention and improvement in building, and they tend to relax the sense of responsibility in architects, owners and contractors, who consider themselves acquitted if their work is not condemned by the official inspector, however bad it may actually be. Then, they widen the field of political corruption, furnish a new list of offices to be bestowed by political bosses in reward for "services" of dangerous character at the polls, and they increase the salary list and corruption fund, already a menace to our liberties. So grave, indeed, are the objections to them that they can be sustained only in the theory that a yet greater train of evils would follow their repeal.

BUILDING LAWS WITHOUT INSPECTORS.

Hitherto a building law has been thought to require a body of inspectors to enforce it, and the more stringent the law the greater the number of inspectors needed. In a city like Chicago a passably thorough supervision of all the buildings in progress so as to detect and correct every infraction of the voluminous building ordinance would afford constant employment to several hundred well trained and Argus-eyed officers. Such a force is out of the question both as to quality and number, and we must face the embarrassing dilemma whether to pay many thousands of dollars a year for a pretended inspection which we know cannot protect or to dismiss the whole force and rely on people's consciences to respect the laws of the city.

A possible solution of the difficulty may be found in devolving upon owners, contractors and architects, who are actually the guilty parties, the responsibility for bad building. The present ordinance might be retained while dismissing the inspectors who do not protect. The money saved from their salaries would, perhaps, adequately compensate a board of three or four experts with large discretionary powers as to enforcing the building ordinance. A copy of this ordinance should be printed on every permit to build, with penalties for its violation. These penalties, among others, should make owners, builders and architects answerable criminally and in civil suits for all damages resulting from any violation of the building laws. Then trust for the enforcement of the law to that sense of personal responsibility and the risk of legal proceedings if detected in violating it

which answers so well in other directions. After a short experience it could hardly fail to secure quite as faithful observance as the old system of official espionage has done; and it would have the great merit of placing the sense of responsibility where it properly belongs, namely, on the parties who are erecting the building, while it would eradicate the corrupting theory that every thing is right which the building inspector fails to condemn, and that if an accident does occur the party to be punished is the inspector who failed to prevent it.

The Poor Man's Lamp.

BY L. K. COMSTOCK, P. H. B.

THE "poor man's lamp" is making good its claim to this title with rather less rapidity than could be desired. Long-winded discussions about "maximum economy" of systems for distribution of electric energy, whether for lighting purposes or power transmission, are powerless to correct the abuses which have crept into, or more strictly speaking, have developed with the growth of electric transmission. These abuses are intolerable. They could not exist in any older trade. These abuses, which are retarding the progress toward perfection and cheapness in the transmission of electric energy, are just such abuses as the architect can and must correct. Every architect, knowing as he does how young is the business of the electrical engineer, how rapidly and to what enormous proportions this business has expanded, must consider that many mechanics in other lines of work have turned their coats and have come into the new field with little or no electrical knowledge. They follow the trade as wiremen a few months and then set up as full-fledged engineers or contractors for construction work. The field has expanded with great rapidity, but the "contractor" has taken his position in the field no less rapidly. They have met encouragement in this by the tendency of central stations to abandon the old system of free wiring and to compel each consumer to provide his own system of interior distribution as best he can. As a consequence he employs the newly-fledged contractor. To be sure, the services of an inspector are usually paid for; how efficacious this may be is seen by the numerous faulty examples which are every day brought to view. The opportunities for iniquitous work are further multiplied by the increasing demand for isolated plants necessitated by the impracticability of attaching to central stations the immense office buildings now going up in our larger cities.

These abuses may be generally classed under two heads:

- I. Faults of Insulation.
- II. Faults of Design.

The faults of insulation cannot be too forcibly brought to the notice of those having to do with electric installations, because, while they may not be as important as faults of design, they are always prolific of evil results; greatest care should be exercised by the architect in specifying good India rubber or gutta-percha insulation, and whenever conditions permit, some good interior conduit; equal if not greater care should be exercised by the superintendent of the installation in seeing to it that the wires are put in place safely and without abrasion. The faults of design are probably less understood than are the faults of insulation. To properly design a system of interior distribution for large buildings requires a great deal of technical skill and judgment which is rarely possessed by the aforesaid "engineer and contractor."

The architect has not had time to keep himself informed as to the best practices in electrical construction, hence it is his business to see to it that the electric construction in his buildings is done by competent engineers.

Forming no small part of the general design of a system of electric distribution is the location of the generating apparatus. It is needless to say that this point has been too much neglected by architects, as well as by the electrical companies themselves. The story is an old one, how often the electric plant has been tucked away into a dark corner where, but for the existence of such a plant, nothing but dirt and rubbish would have been stowed.

In large buildings economy of space is a desideratum; special attention might here be called, therefore, to the use of friction pulleys, which may dispense with belting and countershafting entirely, and will always reduce belting to the minimum.

In large office buildings and residences the wiring resolves itself into an intricate piece of engineering; it is not simply a question of laying wires, but of so disposing the whole system that the distribution shall be uniform—that is, so that there shall be on every portion of the system a given loss of voltage in exact proportion to the loss on the whole system. The loss in conductors should never exceed three

per cent except in the largest buildings, where as much as five per cent may be found advantageous.

The writer especially protests against poor installations; because when properly installed the uses to which the current may be put are legion. The ordinary house circuits, running at 50, 100 or 200 volts, can be utilized not only for incandescent lighting, but for the charging of storage batteries, to run phonographs, fans, electric stoves, heat regulators, annunciator systems, burglar alarms, clocks, and to run power motors for every conceivable device. To summarize: it is absolutely incumbent upon the architect to see to it, in view of what has been said, that the electric work falling under his supervision should not be done in a haphazard way, or by irresponsible parties.

Instruction in Architecture.

ART INSTITUTE, CHICAGO.



gramme appears rather crowded, perhaps beyond the ability of the average student.

It is now two years since it was determined to embrace architecture within the studies taught in the art school, introducing, as it does, such new subjects as construction and mathematics. The architectural class was avowedly experimental and the department has scarcely yet settled into its ultimate form. The first year demonstrated in the judgment of the management that not much in the way of a scientific architectural school could be conducted in the evening, because the attendance was chiefly of draughtsmen from the offices of practicing architects, who were too hard worked to keep up their studies successfully. At the end of the second year it is decided that the methods of the French schools of architecture are not yet applicable to our conditions, and that text-books, stated recitations, and the presence of teachers nearly or all the time are necessary.

The course in architecture, covering two years, is as follows:

COURSE IN ARCHITECTURE—TWO YEARS.

FIRST YEAR. FIRST TERM.

MATHEMATICS.—Geometry: Text-book, Wells' "Plane and Solid Geometry." Descriptive Geometry: Text-book, Church's "Descriptive Geometry and Shades and Shadows."

ARCHITECTURE.—Study of the Five Orders. History of Architecture; Lectures and prescribed Reading.

DRAWING.—Free-hand and Instrumental Drawing; Lettering.

SECOND TERM.

MATHEMATICS.—Descriptive Geometry: Text-book, Church (see above). Plane Trigonometry: Text-book, Wells' "Essentials of Trigonometry." Logarithms and Use of Tables.

ARCHITECTURE.—History of Architecture: Lectures and prescribed Reading. Original Architectural Design; Problems.

DRAWING.—Free-hand and Instrumental Drawing; Water Colors.

THIRD TERM.

MATHEMATICS.—Descriptive Geometry: Text-book, Church (see above). Shades and Shadows: Text-book, Church (see above). Plane Trigonometry: Text-book, Wells (see above).

ARCHITECTURE.—Theory of Design; Lectures and prescribed Reading. Original Architectural Design; Problems.

DRAWING.—Free-hand and Instrumental Drawing; Water Colors.

SECOND YEAR.

FIRST TERM.

MATHEMATICS.—Shades and Shadows: Text-book, Church (see above). Perspective: Text-book, Ware's "Modern Perspective." Graphic Statics.

ARCHITECTURE.—General Construction, Materials, Foundations and Superstructure; by lectures. Original Architectural Design; Problems.

DRAWING.—Free-hand and Instrumental Drawing; Water Colors.

SECOND TERM.

MATHEMATICS.—Perspective: Text-book, Ware (see above).

ARCHITECTURE.—Specifications and Estimates: Text-book, Clark's "Building Superintendence." General Construction; by lectures. Original Architectural Design; Problems. History of Ornament; Reading prescribed.

DRAWING.—Free-hand and Instrumental Drawing; Pen and Ink; Water Colors.

THIRD TERM.

ARCHITECTURE.—Specifications and Estimates: Text-book, Clark (see above). General Construction, with Reference to Ventilation, Sewerage, etc.; by lectures. Original Architectural Design; Problems. Ornament; Problems and Lectures.

DRAWING.—Free-hand and Instrumental Drawing; Pen and Ink; Water Colors.

Mr. Louis J. Millet continues in general charge of the architectural department, Mr. French being director of the whole art school. Mr. Millet teaches architectural design, the orders, ornament, etc. A new appointment has been made to strengthen the mathematical department, of Mr. Walter Francis Shattuck. Mr. Shattuck is a recent graduate of the well known school of architecture in the University of Illinois, and is a son of Professor Shattuck, of Urbana. He is, of course, fresh in the scholastic branches of architectural education, and will take especial charge of the recitations, geometry, trigonometry and perspective, spending three hours every day in the class rooms and drafting rooms.

With the beginning of the year Mr. W. A. Otis, the architect, will take up an extended course of lectures upon the history and

styles of architecture. During the second term Mr. W. L. B. Jenney will begin a course upon construction. Mr. Irving K. Pond will lecture upon the theory of architectural design, and Mr. Wm. L. MacHary, the engineer, will deliver a course during the spring term upon sewerage and ventilation.

The students spend six hours every day, when not engaged in recitations, practising drafting and designing in a sort of architectural studio, visited regularly by the teachers. They also enjoy the use of the library, galleries and appliances of all kinds of the Art Institute, and have the privileges of all the classes in modeling, free-hand drawing, water colors, etc., of the art school, with the approval of the teachers. The year opens Monday, September 28, and continues nine months. The tuition fee is \$25 for every three months. An elementary acquaintance with arithmetic and algebra are required, and elementary geometry is desirable for those entering the school.

The classes of the Art School were rather badly crowded last year, the attendance having suddenly increased nearly one-half. The management of the Art Institute has now taken possession, for the use of the school, of all the studios formerly occupied by artists, and will give to the architectural and designing classes all the class rooms upon the second floor, together with a recitation room above. New drafting tables, and better appliances generally, are provided. It is the hope of the management that the school will at once take its proper place among the educational institutions of the country.

THE UNIVERSITY OF MINNESOTA.

The College of Mechanic Arts of the University of Minnesota has added an architectural chair to the faculty, and proposes to make the course thorough and complete. It commenced with the opening of this year's term, September 1, and is divided into four year classes of three terms each, namely, freshman year, sophomore year, junior year and senior year. Mr. Harry Jones, a prominent architect of Minneapolis, has been called to take charge of the new department.

Notes from our French Exchanges.*

THE NEW CHURCH OF MONTMARTRE.

DURING the recent annual convention of French architects one afternoon was devoted to a visit to the Church of the Sacred Heart, on the high hill of Montmartre, in Paris. This building, probably the largest church now in process of erection in the world, is, according to the inscription on the interior, "Dedicated to the most sacred heart of Jesus by a devout and penitent France," and is the result of a movement inaugurated shortly after the Franco-Prussian war by devout Catholics, who considered that all the humiliation of their country was the direct result of the ungodliness of the nation.

According to *La Semaine des Constructeurs* it is not yet possible to give a definite opinion about the exterior of this monument, since the appearance will, no doubt, be very materially modified when the dome, and also the tower over the apse, are finished. However, it is evident that the great doorway lacks width, and especially height. When a building is built on a mountain it is necessary that the proportions have the most careful study imaginable, which, at this point, seems to have been lacking to a considerable extent.

But when one enters the church the impression changes at once, with its vast porch and its almost square nave one is struck by its majestic proportions. The right and left sides of the nave are defined by three round arches, the middle one of which is larger and higher than the ones at the side, while the choir is inclosed by a series of eleven arches, also round, but narrow, and with center considerably raised above the springing line, like the pointed arches of Amiens, Beauvais and Cologne. When one stands inside of the entrance door, one sees beyond the great altar raised on fifteen steps, and beyond the magnificent white marble statue of the Christ, the ribs of the vaulting of the Virgin's chapel, one cannot help feeling the greatest admiration. This perspective calls to mind the cathedral of Bourges, and all must pay homage to the man who conceived this work, but who today sleeps in his tomb. By a singular effect of light, due possibly to the absence of stained glass as yet in the windows, the space back of the choir has a whitish and vaporous tint, which seems a veritable decoration; moreover, it gives to the building seen from the door a greater length than it really possesses. But the happiest conception of the constructor was that of making his round arches in the arcades rise from a point considerably above the springing line of the arch as usually constructed, thus giving to the whole of this Romanesque church a grandeur approaching that of the great gothic cathedrals. M. Abadie knew the Romanesque to its very foundation, and he had restored for the government the beautiful church of Saint Front, at Perigueux; in that building he saw the round arch raised above its springing, and without doubt appreciated the advantage that might be derived from its use, so that when called to study a plan for the Church of the Sacred Heart he in some sort took Saint Front as a model for his work.

The crypt, very remarkable from the point of view of construction, is high, large, well-lighted, and, considering the masses it has to carry, it could almost be called delicate. Some persons even prefer it to the church proper. From the crypt one descends into the very bowels of the mountain, and here workmen, by the aid of the electric light, are arranging for the gigantic furnace which is to heat this monument.

The grounds in the vicinity of the building also have an interest; here are stones but recently brought to the work yard, and only waiting to be set. Upon one of them were the words, "Saint Pierre du Gros-Cailion," for every parish of France had sent its stone to the hill of Montmartre. Upon the main steps of the building the members of the Congress were photographed, as one of the architects

* Translated and arranged by W. A. Otis, Architect.

remarked, "Probably to get some models for gargoyles." Such are the principal characteristics of this great church of the Sacré-Coeur where the clergy, and the faithful of France, have already spent \$4,500,000, and where it is expected to spend as much more before the building is finished.

"The great bell for the church of Montmartre which has just been cast, and weighs over 50,000 pounds, has been baptized the Savoyard, and is in lower G, in which tone it will deafen with its pious noise the inhabitants of Paris. The transportation of such a mass is not without difficulty, and a special car on the Paris and Lyons road has been made for its shipment, while the great oak framework has been taken to pieces so that it can pass through the tunnels.

It appears that a process by steam will be employed to ring this colossus, whose vibrations will be heard for over twenty miles, and yet how many christians will rest deaf to this appeal!"—*La Semaine des Constructeurs*.

DECAY OF BUILDINGS IN BRUSSELS.

The Bourse at Brussels, that building only built twenty years ago, and which was the admiration of the Belgians, is falling to pieces in the same way as its neighbors, the church of Augustine and the church of Saint Nicholas — making three ruins in the same vicinity that have to be worked over and constantly restored. In the Bourse for the last ten years it has been necessary to be constantly at work strengthening parts that threatened to fall and replacing pieces of stone although they have been there but such a short time. Two years ago the cornices of white stone were literally bandaged with zinc and copper. The lower water table, also in this same poor stone, has lasted its lifetime, and now has become so disintegrated that it must be replaced, and a bluish granite has been selected for the purpose. But what will now be the next step? Will the entire basement be taken out? This is what would seem to be necessary if the building is worth the trouble, but after the basement, would then follow the other stories successively, until the whole building would have been rebuilt. It appears probable that the evil will be concealed under a thin facing of the blue granite, but many affirm that thus closed in the disintegration will only go on the faster. As it now is, the colossal lions that guard the entrance to the building are feeling most decidedly under the weather, since a fortnight ago they barely escaped falling down.

THE SOCIETY OF FRENCH ARCHITECTS FOR MUTUAL DEFENCE.

The Society of French Architects for Mutual Defense makes in its annual report a most favorable showing. The membership is 237, and of the four suits before the lower courts during the last year, three of them were gained by the society, while the total amount during the six years of the society's existence expended in lawyers' fees has been less than \$1,600, leaving a balance of nearly \$1,000 in the treasury.

The almost invariable success of the cases undertaken in the interests of a single member by this powerful organization has rendered clients now very wary of following up any claims upon an architect, when the merits of the case have once been passed upon by this society. The Belgian architects, seeing the advantages to be gained, have just founded a similar institution, and their monthly official publication, *L'Emulation*, gives the by-laws of this society in detail. According to them, the executive committee meets once a month and examines all cases presented before it, appointing arbitrators where so desired, and after taking legal advice, its decision is final and absolute as to taking charge of a case. All requests for aid should be accompanied by the proper documents to clearly state the case; but if desired the claimant may also make a verbal presentation of his case. The decision of the committee may be one of three — affirmative, doubtful or negative. In the case of an affirmative the society takes charge of the case and brings it to trial if an arbitration cannot be effected. Should this case be lost, all the expense is borne exclusively by the society; but if it is won, the litigant pays all the actual expenses and also five per cent of the damages awarded is turned over to the treasury of the society. If the committee, after consideration of the question, decides it to be doubtful, or gives a negative decision, the society will not incur any pecuniary responsibility in the suit unless, however, some undecided question of special professional interest is involved, when by a unanimous vote of the committee the case may be taken in charge. If, however, notwithstanding the decision of the committee, a plaintiff desires to bring to trial a doubtful or negative case, the committee shall, if so desired, aid with its advice and influence to obtain a favorable verdict, but in this case the litigant must first deposit in the treasury of the society a sum estimated by the committee as sufficient to pay the expenses. In case the suit is gained, the society turns over to the party all the costs awarded by the court, retaining always the five per cent of damages allowed. If the suit is lost, however, all expenses are to be borne by the litigant.

THE Nineteenth Annual Exhibition of the Interstate Industrial Exposition of Chicago will open September 16, and close October 24. The great building has been completely and fully decorated, and all available space allotted to intending exhibitors, for what promises to be the most complete and magnificent exhibition in its long history. The Cook County Agricultural and Horticultural Society, with a prize list running into the thousands of dollars, have undertaken a floral display that has never been equaled in this country.

In the building will be also exhibited an exact reproduction in miniature of the buildings and grounds of the World's Columbian Exposition, with magnificent electric effects; covering as it does a space of 5,000 square feet, it is one of the wonders of modern mechanical art, and will be worth a journey to see.

The Lincoln Log Cabin Association will also be exhibitors.

All railroads transport passengers at excursion rates.

Annual Convention of the A. I. A.

THE following circulars, relating to the forthcoming convention at Boston, have been issued; others will follow as arrangements are completed:

AMERICAN INSTITUTE OF ARCHITECTS.

SECRETARY'S OFFICE,
AUDITORIUM TOWER, August 24, 1891.

DEAR SIR,—The twenty-fifth annual convention of the American Institute of Architects will be held at Boston, Massachusetts, on Wednesday, Thursday and Friday, October 28, 29 and 30, 1891. As soon as the Committee on Arrangements shall have completed its work, information will be given as to the order of exercises, the arrangements made for railroad and hotel fares, headquarters, etc.

It is hoped that the attendance at this convention will be an exceedingly large one, and that its social developments as well as its business proceedings will be the most interesting and successful in the history of the architectural societies of this country. With this end in view, the Fellows of the Institute are requested to make strenuous efforts to so shape their affairs as to be able to attend the convention, and the Committee on Arrangements wishes to receive suggestions from individual Fellows and from Chapters as to matters of interest which they wish to bring to the notice of the Institute.

Papers upon artistic, scientific or administrative problems will be welcomed by the committee, and the papers themselves, or at least their titles, should be sent to the undersigned at as early a date as possible.

The Boston Chapter has instituted an exhibition of architectural drawings for the convention week, and invites the Fellows of the Institute to participate therein. Particulars as to this will be given upon application to the Executive Committee, No. 6 Hamilton Place, Boston, Massachusetts.

Yours very truly,

DANKMAR ADLER, Secretary A. I. A.

BOSTON ARCHITECTURAL EXHIBITION.

The annual convention of the American Institute of Architects is to be held in Boston, October 28, 29 and 30, and the Boston Society of Architects and the Boston Architectural Club have united to organize in connection therewith an architectural exhibition, to which architects and draughtsmen are invited to contribute. The exhibition will include all kinds of architectural drawings, sketches, plans, details, decorations, drawings of furniture, interiors, etc., as well as photographs of executed work, though it is quite desirable that the latter should be accompanied by sketch plans, as far as possible. As the exhibition will appeal primarily to the architects as a professional body, it is hoped that the contributions will by preference be largely such as will illustrate the actual office work and study of the architect, not however to the exclusion of purely artistic rendering, or picturesque sketches. In order to be properly exhibited all contributions should be framed or mounted on stretchers. No exhibition blanks are necessary, but each drawing should bear the name and address of the exhibitor on the back. When the draughtsman and the exhibitor are not the same, it is desirable that the draughtsman's name should appear on the front of the drawing. Arrangements have been made with the following firms to act as agents for the exhibition: Clendon H. Sheen, 166 Race street, Cincinnati; M. O'Brien & Son, 208 Wabash avenue, Chicago; William S. Budworth & Son, 1 West Fourteenth street, New York; William O'Leary & Co., 236 Woodworth avenue, Detroit; George F. Heffernan, 1010 Olive street, St. Louis; J. F. Ryder, 239 Superior street, Cleveland; A. P. McElroy, 1001 Pennsylvania avenue, Washington; James S. Earle & Sons, 817 Chestnut street, Philadelphia; Stevens & Robertson, 31 East Third street, St. Paul; Hoddick & Co., 620 Main street, Buffalo.

Contributions for the exhibition can be sent to any of the above, but must be in their hands on or before Monday, October 12. After that date drawings may be sent to the Executive Committee, 6 Hamilton place, Boston, but in order to appear in the catalogue, must be received in Boston on or before October 19.

The firms above mentioned will receive, pack, forward and return in proper order all contributions for the exhibition without expense to contributors, and will also call for any large or especially heavy drawings, if properly notified three days in advance. Upon arrival in Boston, a receipt for each drawing will be mailed to the individual exhibitors. The drawings will be properly insured and will be forwarded through our agents at the risk of the Executive Committee.

Drawings and contributions from other cities, or not forwarded through our agents as above listed, are to be expressed to the Executive Committee, 6 Hamilton place, Boston, at the expense and risk of the exhibitors, but all return charges will be paid by the committee. Such contributions must be despatched so as to reach Boston on or before October 19.

All contributions will be received subject to approval of the Reception Committee. The exhibition space at our command is so large that there need be no limit to the number of drawings receivable from a single exhibitor.

An illustrated catalogue is to be published, and the committee will be glad to receive contributions for the illustrations of the same, from which a selection will be made as far as the limits of space will permit. Drawings for the catalogue should be made with black ink, and must be sent the committee before September 20.

C. H. BLACKALL, } Executive Committee.
W. C. NORRIS, }

New Publications.

DETAILS OF DECORATIVE SCULPTURE; Italian Renaissance. Boston, Bates, Kimball and Guild. 50 octavo plates, with portfolio, in box; \$2, post paid.

Some three years ago, in commenting upon a portfolio of Mr. Richardson's work, we coupled with our praise of its many good qualities the statement of our belief that the style which he practically inaugurated was, as used by him, too severe for the American character, so far as that character, partially unified, could be estimated; and the suggestion that the lighter work to be found in North Italy and parts of France would afford us more appropriate styles. It still seems to us that this comment was well grounded. Many of those who felt the influence of Mr. Richardson's vigorous work fell into an imitation that failed of the dignity and became mere heaviness bordering dangerously close on clumsiness; and in the resultant reaction those men who had held faithfully to more urbane styles, have found plenty of company from the recruits from the ranks of the variable. It is in keeping with this trend of feeling, that publishers are putting forth additional works on Italian renaissance and sundry editions dealing with the "five orders." Whether the little book put forth by Messrs. Bates, Kimball and Guild, will be all that the purchaser desires in such a work, will be largely a question of individual methods. The subjects have been chosen with discerning taste; there is practically nothing that one would wish omitted; and the question of greater bulk is always one to which an arbitrary limit must somewhere be set. The reproductions are from effectively-taken photographs, nearly in elevation where the purpose could be so met, and are very attractive in make-up. If one has become already sufficiently grounded in decorative design not to feel the need of profiles of moldings and elevations drawn to scale, and merely wishes to stimulate the imagination by reproductions that present mechanically, but with the greatest possible exactness, the feeling of the original works, then

this little collection will serve the purpose admirably. For the student who wishes at once a stimulus to the imagination and a task-master in details, the work should be supplemented by some such portfolio as the Kinkross compilation (50 quarto plates) in which almost these identical subjects (with many others) are dealt with to the scale in thorough fashion. Our own notion is that if the student can afford but one portfolio, he would be wise to take that which will most strongly impress him with the artistic values of the work; and this is to be found for the average draftsman in such a collection as this smaller one, and at a price which puts it within the reach of all. Among the buildings from which subjects have been selected are: the Church of Santa Croce, Palazzo Vecchio, Palazzo Gondi at Florence, the Ducal Palace at Urbino, the Church of Santa Maria dei Miracoli, the Ducal Palace and St. Mark's at Venice. The portfolio will also have a value for the lover of architecture who is not a practitioner.

THE METAL WORKER ESSAYS ON HOUSE HEATING, by steam, hot water and hot air, with an introduction and tabular comparisons; arranged for publication by A. O. Kittredge. David Williams, New York, publisher.

This is a neatly printed and substantially bound book of 288 pages, the subject matter being the prize essays on the subjects named in the title, evolved by a competition proffered by the *Metal Worker* in 1888 on the result of a former competition in the *Carpentry and Building* on floor plans and elevations of a dwelling house. The *Carpentry and Building* prize plans and elevations were placed in the hands of the *Metal Worker* competitors with lines indicating the position of the heater, runs of pipes, location of radiators, registers, etc. Of course these plans, elevations, and other appropriate diagrams accompany the text. We have been thus particular to mention the circumstances under which the several essays, fifteen in all, appeared, that the value and importance of this book may be fully appreciated, particularly as the several essays are the opinions of men whose knowledge of the subjects treated are beyond questioning. That this book will be a standard authority among architects and contractors is a foregone conclusion.

SKETCH BOOK OF THE BOSTON ARCHITECTURAL CLUB; issue of 1890. Copyright, 1891, by R. Clipston Sturgis, Sec.

Perhaps it is unnecessary to say anything more of this portfolio than that the collection has been compiled by the Boston Architectural Club, and that the plates are reproductions of the work of its members. This of itself is such commendation that, in view of the success of its exhibitions, the reputation of its members and the enterprise of its management — art lovers are warranted in purchasing the portfolio without previous examination. The opening is auspicious, for, whether by accident or design, the first place has been given to Mr. S. W. Mead's North Tower of Rouen — a plate which is far superior to any of the remaining ones, both in mechanical work, draftsmanship and grouping. So pleasing is it that one's favorable apprehension is apt to become almost a conviction, and causes one to examine the succeeding plates with favorable prejudice. In this drawing the surroundings, though carefully drawn, without obtruding, direct the eye to the subject, or else by their contrast emphasize the characteristics of the tower on which Mr. Mead has laid the most stress. One does not stop to notice a group of figures in the foreground, or become confused by a multiplicity of features. In fact, it stands the true test of a composition, nothing being possible to be taken away or added without positive injury to the picture.

The same may also be said of the three sketches of James C. Green, whose grouping is quite charming, but which being almost in outline, lose some of the effect of color and texture that Mr. Mead has given his. This grouping, we think, deserves particular commendation, for it is the want of surroundings and proper composition in which the architectural drawings of today are especially lacking.

Messrs. Brunner, Newton, Blackall and C. Howard Walker have contributed color drawings which, though the unusual merit of the originals is obvious, have not reproduced favorably. Mr. Walker's study of St. Owen in particular shows such delicacy in his distance, totally spoiled by the muddy reproduction of the foliage, that it is a pity the additional expense of a colored plate was not incurred.

Likewise some of the pencil drawings have suffered, noticeably Mr. Van Straaten's drawings from the Dutch, this being especially unfortunate, as his are among the best selected subjects in the collection. Mr. Van Straaten's drawing of the Palazzo Contarini, the reputed home of Shakespeare's Desdemona, deserves notice for the tenderness of its treatment and the success of its texture effect. T. Henry Randall's drawing of the same building is so entirely different in style that the repetition of subject does not affect the value of the collection.

Walter Cope sends two pleasing old French houses; Francis Bacon is represented by one of his Greek sketches; W. E. Eames' drawing of a Venetian courtyard and Frank Miles Day's staircase at Blois have been published before and need no description.

The name sketches can hardly be applied to some of the drawings, yet the greater part of the contributors took the word literally and sent sketches which stand in the same relation to finished drawings that stenographers' notes do to an oration. Among these Wilson Eyre's, John Galen Howard's and Denman W. Ross' are undoubtedly from their own personal note books, and while showing a true appreciation of the work, would fail to give the conception to one unfamiliar with the buildings. Whether this is a fault or not depends on the class from which the work will find its patrons. If among persons of artistic taste, as it without question will, their knowledge of the subjects will supply what the delineator has omitted. To the general public, however, they possibly would prove uninteresting.

The selection of subjects has been almost uniformly good. Nowadays, when opening a portfolio of sketches, one knows for the greatest part what to expect. The cloisters of St. Trophime, the bridge over

the moat at Nuremburg, the castle of Chillon, always drawn from the same point of view, stare at us periodically from the envoys of our traveling students. Here this has been avoided and only a few of our old acquaintances are thrust forward for our attention.

The mechanical work, with the above mentioned exceptions, is excellent, surpassing anything we have seen for the price, namely, forty-eight photo-gravures in portfolio for five dollars. The binding is tasty, durable, and—as is desirable in architectural books—suitable either for office or library use.

BIBLIOTHECA POLYTECHNICA: A Directory of Technical Literature. A classified catalogue of all books, annals and journals published in America, England, France and Germany, including their relation to legislation, hygiene and daily life. Edited by Fritz von Szczepanski. First annual issue. Crown 8vo, cloth. New York: The International News Company, 83 and 85 Duane street. 75 cents.

We have reproduced this title-page in full because it supplies the place of both title-page and preface, and sets forth clearly what the editor aims to accomplish, and it only remains to note how successfully the project has been carried out. The little book consists of eighty closely printed pages. The arrangement is topical-alphabetical, the names of the various branches of the subject being carried through the book in the three languages with cross references to the headings under which they are treated in detail, and under these headings the arrangement is author-alphabetical, except for periodicals, which have a title-alphabetical grouping. The headings of main divisions are given throughout in the three languages. The subjects cover everything that can with any propriety be classified as a technical occupation. The range of the book may be well enough illustrated by a few topics chosen quite at random: thus, architecture, its history, periodicals, representations of existing work; baking, photography, dyeing, hat making, marine engineering, brewing, metal working, electricity in its various phases, thermo-dynamics, etc. So far as can be judged by such examination as we have been able to give, the book is complete in its various undertakings; so that the student of any technical trade or profession who is fairly well posted on the existing literature of the subject, or has at hand some bibliography of it may, by the aid of such a handbook, keep posted in the yearly additions thereto.

Our Illustrations.

Design for a residence at Omaha, Nebraska; I. Hodgson, Jr., architect.

House for M. Bodenheimer; Alfred F. Rosenheim, architect, St. Louis, Missouri.

Accepted design for Alamo Baptist Church; J. R. Gordon, architect, San Antonio, Texas.

Residence for F. M. Carter, Walnut Hills, Cincinnati, Ohio; George W. Rapp, architect.

St. John's Mission Chapel, Cambridge, Ohio; William Martin Aiken and E. H. Ketcham, architects, Cincinnati, Ohio.

Milwaukee Art League Competition for a Country Toll Gate; first place, Elmer Gray; second, F. J. Voith; third, Julius Hermer.

Block of houses for James W. Savage, Omaha, Nebraska; I. Hodgson, Jr., architect, Omaha, Nebraska, and Portland, Oregon. Administration Building, World's Columbian Exposition, Chicago, Department of Construction, September, 1891; Richard M. Hunt, architect, New York.

Agricultural Building from North East, World's Columbian Exposition, Chicago, Department of Construction, September, 1891; McKim, Mead & White, architects, New York.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Western Bank Note Building, Chicago; Charles S. Frost, architect.

The Berkshire Apartment Building, Chicago; W. A. Otis, architect.

Detail of Entrance to the Berkshire Apartment Building, Chicago; W. A. Otis, Architect.

Residence of C. H. Chandler, Evanston, Illinois; Raeder, Coffin & Crocker, architects, Chicago.

Residence of George B. Carpenter, Dearborn avenue, opposite Washington Park, Chicago; Treat & Foltz, architects.

Residence of H. G. Chase, corner Thirty-fourth street and Michigan avenue, Chicago; Edbrooke & Burnham, architects.

Residence, No. 2 Banks street, corner of North State street, Chicago, for Franklin H. Head; Irving K. Pond and Allen B. Pond, architects.

Association Notes.

THE CHICAGO ARCHITECTURAL SKETCH CLUB.

THE first of the fall meetings of the club was held Monday, Sept. 7. An informal lunch was served. The evening was devoted to sociability and the inspection of an exhibit of water-colors by E. Eldon Deane which was much admired. A number of new members were admitted, among whom was Julius Harder, well-known for his success in competitions of the New York architectural league, etc.

THE BUILDERS' ASSOCIATION OF BUFFALO.

The Buffalo (N. Y.) *Illustrated Express*, of a recent date, accompanies a finely-engraved cut of the Builders' Association Exchange Building of that city, with a history of the association from its incipency in 1867 up to its becoming an integral of the National Association of Builders twenty years after.

The first organization was completed February 19, 1867, the result of a call upon the fraternity by Mr. Joseph Churchyard, under

date of the sixth of that month, urging the advisability of a more intimate social relation and acquaintance with each other, with the end in view "to check the bitterness of rivalry" and to enhance, by interchange of skill and knowledge, their general usefulness. The officers of the initial organization were: Amos Morgan, president; Henry Rumrill, vice-president; Thomas B. Tilden, treasurer; Joseph Churchyard, recording secretary; J. H. Tilden, corresponding secretary.

The present organization incorporated in April, 1888. It has a stock of \$5,000, in shares of \$50 each. The membership comprises two classes—corporate members, who are the stockholders and number 100, and non-corporate members, numbering 52, who have the privileges of the exchange and reading room; all are firms actively engaged in the building business.

The first officers under the union with the National Association were: John Feist, president; Michael McNamara, vice-president; John R. Monroe, treasurer; Jared H. Tilden, secretary. The officers of the current year are: W. D. Collingwood, president; Joseph Metz, vice-president; Edward L. Cook, secretary; George M. Stowe, treasurer. Trustees: John Feist, J. H. Tilden, M. McNamara, Charles Geiger, J. A. Wolsley, James Boland, C. A. Rupp, G. W. Carter, George E. Frank.

Synopsis of Building News.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Buffalo, N. Y.—Architect W. H. Archer: For the St. Columbas Rectory, corner of Eagle and Hickory streets, Buffalo, New York, brick and stone, with slate and tin roof, galvanized and wood cornice, three stories and basement, 52 feet by 31 feet 6 inches, inside finish, oak staircase and reception hall, the remainder of the house white wood, natural finish, large dining halls, mantels, bathroom, lavatory and toilet apparatus, lift pantries, wine cellar, gymnasium and all modern improvements, heated with hot water and special improvements in ventilating arrangements, speaking tubes, stained and plate glass, etc. For the District School No. 3, Tonawanda, New York, brick annex with tin roof and twenty-four sanitary water-closets, arranged to accommodate eight hundred pupils, with steam heat, brick ventilating stack, automatic flushing, concrete floor, urinal, etc. For the Higgins new hotel, Tonawanda, New York, a frame building, 40 feet by 60 feet, comprising three stories and basement with accommodations for forty guests, also an office, bar, billiard, dining and reception rooms, with kitchen and pantries in the rear, chambers, lavatories, bathrooms and toilet apparatus on the first, second and third floors, main and back staircase, plate and other glass, tin roof, copper bath, porcelain water-closets, commodious cellar and heating apparatus.

Chicago, Ill.—Architects Edbrooke & Burnham: For the Mecca Company, a four-story apartment house, 236 by 266 feet in size, to cost \$500,000; to be erected on State and Thirty-fourth streets, running through to Dearborn street. It will be of pressed brick and stone, have elevators, electric light, steam heat, marble and tile work and all improvements. It will contain 111 suites of apartments, besides ten stores.

Architect George Grussing: For George McLester twelve frame houses to have stone basements, sanitary plumbing, furnaces, etc.; cost \$36,000; to be erected at Ridgeland. For syndicate at Antioch, Illinois, a two-story and basement opera house, 42 by 106 feet in size, to cost \$18,000; Burlington pressed brick and Bedford stone, tin roof, hot-water heating, etc.

Architect E. R. Krause: For C. E. Robinson, corner of Dearborn and Nineteenth streets, a four-story, store and flat building, to cost \$12,000; pressed brick, stone and terra cotta, steam heat, hardwood finish. Making plans. For Miss Sherwood, on Thirty-seventh street near Cottage Grove avenue, a two-story residence, 20 by 100 feet, to cost \$10,000; Anderson pressed brick and Portage stone, slate and gravel roof, copper bay, furnace, etc.

Architect D. S. Pentecost: For S. A. Wight, on Lawrence avenue, between Forty-eighth and Forty-ninth streets, a four-story apartment house, to cost \$30,000; pressed brick and stone, steam heat. For the same owner, on the southeast corner of Thirty-fifth and Wood streets, six three-story stores and flats, to cost \$36,000. Making plans.

Architect Thomas Hawkes: For Benton Sturgis, corner of Wabash avenue and Eighteenth street, a two-story hotel and stores, 80 by 118 feet, to cost \$20,000; Buff pressed brick with red brick trimmings.

Architect D. A. Lapointe: For H. B. & Heaton Owsley, a block of three-story stores and flats, 150 by 75 feet, to cost \$40,000; to be erected at 218 to 228 Fullerton avenue. For A. J. Lewis, at 1371 Washington boulevard, a three-story flat building, 25 by 100 feet, to cost \$10,000; Bedford stone front, hot-water heating. For A. J. Lewis, on Washington boulevard near Wood street, a three-story store and flats, 60 by 80 feet, to cost \$35,000. Stone front, hot-water heating, etc. Making plans. For H. J. Armstrong, a three-story flat building, 40 by 60 feet, to cost \$16,000; to be erected on the corner of Paulina and Monroe streets. Bedford stone front, hardwood finish, stained, plate and beveled glass, marble work.

Architects Morrison & Foster: For J. A. Dunham, at Madison Park, seven two-story residences, to be of stone fronts and cost \$40,000.

Architect Julius Speyer: For Peter Burk, on Kimbark avenue, between Fifty-fifth and Fifty-sixth streets, a three-story flat building, 50 by 70 feet; to cost \$18,000. Pressed brick and stone.

Architects Dahlgren & Lievendahl: For Dr. Abbott, at Ravenswood, a two-story basement and attic frame residence, stone basement, hardwood interior, furnace, etc. For De Witt Van Evera, at Ravenswood, a two-story flat building, of pressed brick and stone.

Architects Huehl & Schmid: For Sam Richardson, on Frederick street, a three-story flat building, to cost \$11,000; brown stone and pressed brick.

Architect J. L. Merriam: For J. N. Cunningham, five two-story flats, on Lawndale avenue, to cost \$18,000; pressed brick and stone.

Architect C. F. Whittlesey: For F. B. Townsend, at Sycamore, Illinois, a two-story frame residence, to have stone basement, hardwood finish, hot-water heating; cost \$12,000.

Architect A. A. Fuller: For Charles Grewe, a three-story flat building, on Wentworth avenue, near Thirty-first street; Bedford stone front, pine finish, etc.

Architect J. E. Scheller: For W. J. Davis, Geneva, Illinois, a two-story frame residence, to have stone basement, hardwood interior, furnace, etc. Also making drawings for a three-story flat building, to be erected on the West side; pressed brick and stone; cost \$40,000.

Architect Julius H. Huber: For Portman & Parker, on Halsted street, Buena Park, a two-story frame residence, stone basement, hardwood interior, hot-water heating, electric light; cost \$10,000.

Architect Robert Rae: For Mrs. F. Norton, at Ravenswood, a two-story residence of frame, with stone basement, hardwood finish, furnace, etc. For Dr. J. P. Morison, on Grand Boulevard, near Thirty-ninth street; three two-story, Bedford stone front residences, to have hardwood interiors, steam heat, and cost \$21,000. For Lincoln Brooke, at Washington Park, a three-story flat building, of pressed brick and stone, hardwood finish, steam heat, etc.; cost \$40,000. Making plans.

Architect Francis J. Norton: For A. H. Fitch, of Austin, a six-story apartment house, to be erected on Wabash avenue, between Thirty-sixth and Thirty-seventh streets; peerless pressed brick, Bedford stone, terra cotta copings, copper bays, elevator, dumb waiters, marble wainscoting; cost \$65,000.

Architects Jenney & Mundie: For E. J. Martyn, on Astor street, near Schiller, a three-story residence, of buff Bedford stone front, hardwood interior, marble

work, electric light, hot water heating; cost \$18,000. For the American Express Company, corner of Sebor and Clinton streets, a four-story express building and stables, to be of pressed brick and stone, have electric light, elevator, etc.; cost \$200,000.

Architect Theodore Karls: For L. G. Spencer, at 284 West Madison street, a seven-story and basement store, of pressed brick, stone and terra cotta, steam heat, elevator, electric light; cost \$22,000. Making plans. For H. Brockhaus, at 636 North Clark street, a two-story flat building, of pressed brick and stone front; cost \$6,000.

Architects Jaffray & Ohrenstein: For Dr. G. Fisher, on Ogden avenue, corner Washenaw avenue, a three-story store and flat building, of peerless pressed brick and stone front; cost \$10,000. For J. J. Kearney, at Wilmette, a two-story frame house. Also planned, a two-story frame house, to be erected at Woodlawn avenue, and a handsome frame residence, to be built at River Forest.

Architect Oscar Cobb: For Mrs. K. L. Ming, at Helena, Montana, a three-story business block and hotel, and remodeling theater. Making plans. For Dr. J. C. Taylor, at Irwin City, Pennsylvania, making plans for remodeling theater; will put in new balconies, galleries, frescoing, steam heat, electric light, etc.; cost \$30,000.

Architects Freijs & Bartlett: For Henry Sandmeyer, on Sixty-third street, Woodlawn, a three-story store and flat building, of Bedford stone front, hardwood interior, steam heat, etc. For William E. Fisher, at Norwood Park, a two-story frame residence; to have stone basement, hardwood finish, steam heat, electric light, gas machine, etc.

Architects Wilson & Marble: For E. B. Stone, on the southeast corner of Paulina and Jackson streets, a four-story residence, of brownstone for the front and brown pressed brick on the sides; hardwood finish, steam heat, electric light, freight elevator, etc.; cost \$60,000. For W. R. Condict, at Evanston, a two-story residence of frame with stone basement, hot-water heating; cost \$30,000. For C. F. Crafts, at Austin, a two-story frame residence, stone basement, stained, plate and beveled glass, furnace, etc.; cost \$10,000. For Stiles & Rea, at 3640 Michigan avenue, a four-story apartment house; steam heat, elevator, electric light, marble, tile and mosaic work; cost \$35,000. For Barry Brothers, on Forty-third street and Grand boulevard, six Bedford stone front residences; electric light, hot-water heating; cost \$75,000.

Architect L. G. Haltberg: For the Ludington estate, corner of Wabash avenue and Harmon court, an eight-story store and warehouse; 70 by 165 feet in size; cost \$200,000. To be of stone front and sides, fireproof construction, have four elevators, electric light, steam heat, etc.

Architects Patton & Fisher: For Ed. Hildreth, at 357 West Madison street, a three-story store and flat building; cost \$30,000. For J. H. Howard, southeast corner Forty-eighth street and Kimbark avenue, a two-story residence, of stone, tile and slate roof, hot-water heating, etc.; cost \$15,000. For Arnold Heap, at 1423 Washington boulevard, a two-story residence, of brownstone front, hardwood finish, furnace, etc.; cost \$7,000. For the Universalist brick church at Elgin, figures all in; cost \$15,000.

Architect T. N. Bell: For Batchen Brothers, a six-story warehouse and factory; size 100 by 144 feet; cost \$40,000. Steam heat and power, two elevators, electric light. For Mrs. Mary F. Boyer, at 4514 Champlain avenue, a three-story flat building, of cut stone front, steam heat and all improvements.

Architect Gottfried Thiel: For Herman Riesch, southwest corner Chicago avenue and Rockwell street, a four-story store and flat building, of pressed brick and stone; cost \$12,000. For John Schayer, on Division street near Rockwell, a three-story flat building, of St. Louis pressed brick and stone; cost \$8,000.

Architect W. G. Ruehl: For Frank Hoepfner, corner of Potomac and Western avenue, a three-story store and flat building of Buff Bedford stone front; cost \$12,000. For P. D. Cook, at 1164 Adams street, a three-story flat building of blue Bedford stone front.

Architect W. M. Wolters: For James Judge, at 362 Van Buren street, a four-story store and flat building of pressed brick and stone with gravel and tile roof.

Architect E. F. Bargman: For R. Valentine, a three-story store and flat building at the corner of Wood and Polk streets. The front will be of Collinsville pressed brick and Bedford stone, with galvanized iron bays and cornices and Indiana pressed brick on the side; the cost will be \$16,000. For Charles Corazza, corner of Harrison and Francisco streets, a three-story store and flat building, of pressed brick and Bedford stone; cost \$12,000. For V. Abate, at 14 Hinsche street, a three-story flat building of pressed brick and stone front.

Architect D. S. Pentecost: For George W. Shoop, at 147 to 149 Sacramento avenue, two two-story flat buildings, 44 by 52 feet in size, of St. Louis pressed brick and stone, and at 142 to 144 Colorado avenue, two three-story stores and flats, 43 by 60 feet, of St. Louis brick and stone, the whole to cost \$22,000.

Architect S. V. Shipman: For Carson, Pirie, Scott & Co., at 106 to 116 Law avenue, a six-story warehouse, 150 by 100 feet; cost \$75,000. Pressed brick and stone front, elevator, steam heat, electric light.

Architect Julius Speyer: For P. W. Ryan, on Fifty-fifth street, west of Cottage Grove avenue, a six-story and basement store, flat and hotel building, 85 by 70 feet in size; cost \$60,000. Ashland variegated brown stone front, with large bay windows of copper; interior to be finished in hardwood and have steam heat, electric light, marble and tile-work, gas ranges and fire-places. For John Doyle, on Van Buren street and California avenue, a three-story store and flat building, to be of buff Bedford stone front. For A. B. Lewis, at Montrose, a two-story double house and a two-story residence, to be of frame with stone base, ment, and cost \$10,000.

Architects Lamson & Newman: For C. M. Staiger, at 172 Fullerton Avenue, a two-story residence of pressed brick and stone front, copper bays, steam heat, etc. For C. A. Brown, corner of Wood and Jackson streets, a three-story flat building, to be of stone front, have hardwood finish, steam heat, and cost \$21,000.

Architects Baumann & Cady: For Joseph Hobson, a six-story hotel, on the southeast corner of Michigan avenue and Twelfth street; cost \$25,000. For Stewart Spaulding, on State street, near Banks, a three-story residence of stone front, hardwood interior, hot-water heating, etc.

Architects Flanders & Zimmerman: For James B. Mallers, on Market street, between Quincy and Jackson, a twelve-story warehouse, to cost about \$300,000. Pressed brick and stone, gravel roof, steam heat, electric light, etc. Making plans. For the Kimball Carriage Company, on the southwest corner of Michigan avenue and Harmon Court, a seven-story store, 80 by 171 feet in size, to cost about \$200,000. Pressed brick, stone and terra cotta, with handsome tower with Spanish tile roof. Steam heat, electric light, elevators. Working on plans. Also taking bids for seventeen-room school, 97 by 130 feet in size, three-story and basement, of stone basement and pressed brick and stone above, hardwood interior finish, gravel roof, steam heat, etc.; cost \$70,000, to be erected on Harrison street, near Sacramento avenue. Also taking figures for three-story school, 170 by 120 feet in size, to be erected corner of Deering and Thirty-first streets. Pressed brick and stone, steam heat; cost \$80,000.

Architect L. B. Dixon: For J. Ogden Armour, a three-story and basement residence, 60 by 80 feet in size; to cost about \$150,000. It will be constructed of Bedford stone and have a roof of red tile and terra cotta; hot-water heating will be put in, electric light, elevator, marble and tile work, and the best of everything. The location is northwest corner of Michigan avenue and Thirty-seventh street. For P. Walker, he planned a two-story, basement and attic residence, 30 by 78 feet in size, to be erected at 3213 Catumet avenue. It will have a front of brown stone, with bays and cornice of the same and copper bay on the side and slate roof. The interior will be finished in hardwood and have hot-water heating, etc. For C. H. Farwell & Co., at Dixon, Illinois, a three-story shoe factory, 200 feet long by 44 feet wide, to be of common brick, mill construction; it will have steam heat, electric light, elevators and gravel roof.

Architect Cass Chapman: For George D. Morgan, at 236 Johnson street, a four-story warehouse, of common brick; cost \$20,000. For Duplacy Bros., on Forty-eighth street and Langley avenue, a three-story flat building, 125 by 56 feet in size; cost \$35,000. To be of stone and have all improvements. Making plans.

Architect D. A. Blythe: For a Chicago syndicate, a four-story and basement flat building, to be erected in the neighborhood of Vincennes avenue and Forty-sixth street. It will have a total frontage of 500 feet and be 80 feet deep. The first story will be of cut stone and above of brown pressed brick, with cut stone trimmings, copper bays and galvanized iron cornice, gravel roof, hardwood interior hardwood finish, steam heat, electric light, gas fixtures, gas ranges and fire-places, marble and tile work, window and door screens, etc.; the cost to be about \$400,000.

Architect J. A. Thain: For Mrs. Virginia Garland, a three-story flat building on Twenty-fourth street and Prairie avenue, 33 by 100 feet; cost \$25,000; Bedford

stone front, hardwood interior, hot-water heating, etc. For J. R. Lang, on Vincennes avenue near Thirty-ninth street, a three-story residence of St. Louis brick and stone, hardwood interior, furnace; cost \$12,000. For J. W. Cassell & Co., on Sixty-second street and Ellis avenue, five three-story Bedford stone front residences; hardwood finish, furnaces, etc.; to cost \$50,000. For Julius Loeb, on Everett avenue, near Jackson Park, a three-story residence, of frame, with stone basement, hardwood finish, furnace, etc.; to cost \$12,000.

Architect W. W. Boyington: For Heath & Milligan, at Eighteenth and Seward streets, a four-story paint factory, 100 by 200 feet in size; to be of common brick, with gravel roof, steam heat, electric light, etc.; cost \$60,000.

Architects Ostling Bros.: For Miss Christina Nelson, at 31 Humboldt street, a three-story flat building; to be of pressed brick and stone, and cost \$13,000. For John Peterson, on Twenty-fourth place, a two-story flat building of St. Louis brick and stone; cost \$10,000.

Architect E. M. Newman: For P. W. Gray, a two-story residence, corner of Palmer and Sulzer streets, Ravenswood; to be of frame, with stone basement, have hardwood finish, electric wiring, steam heat, etc. For Robert Miehle, corner of Addison and Sheffield avenues, a three-story flat building of brownstone front; to have hardwood finish, steam heat and all improvements.

Architects Snyder & Nothnagel: For A. Backofen, a four-story store and flat building, corner of Halsted and Sixty-second streets, Englewood; to be of pressed brick and stone; cost \$15,000.

Architects Crowen & Richards: For Mr. S. K. Elmore, a three-story apartment house, 50 by 72 feet; to cost \$20,000; to be erected on Maryland avenue and Sixty-second street; the first story to be of Bedford stone, and above of buff pressed brick and stone; to have hardwood interior, steam heat, electric light and all sanitary improvements.

Architects Blitz & Marshall: For J. H. Perkinson, on Adams street near California avenue, a two-story flat building of pressed brick and stone; to have sanitary improvements, furnaces, etc. For H. S. Smith, on University Place, a three-story flat building; to be of stone and pressed brick, and have gravel roof, steam heat, etc. For Mrs. Winn, on Washington boulevard near California avenue, a three-story residence; of Bedford stone front, steam heat, electric light, etc. Also making plans for frame church to be built at Findlay, Ohio.

Architect Henry Sierks: For Peter Ott, on the corner of Robey and Waubansia avenue, a three-story and basement store and flat building; of pressed brick and stone; to cost \$15,000. For Peter Thompson, on Milwaukee avenue and Short street, a two-story store and flat building; of pressed brick and stone front; to cost \$12,000.

Architects S. Linderoth & Co.: For H. Brin, at Fifty-ninth and Halsted streets, a three-story flat building; cost \$25,000; pressed brick and stone, galvanized iron bays, slate tower and gravel roof; taking bids. For John A. and S. Linderoth, at Sixtieth and Sherman streets, a two-story flat building. For the Linderoth Ceramic Company, at Fifty-second and Wallace streets, a two-story factory; to cost \$27,500; to be of common brick, have electric light, engine, boilers, crushers, grinders, pug mills and other clay machinery for making enameled brick, tiles and porcelain mantels; now letting contracts.

Architect A. Druiding: A Catholic church, 135 by 60 feet, with two towers 160 by 125 feet in height; to be of pressed brick and stone, have slate roof, hot-water heating, stained glass windows, groined ceiling; to cost \$45,000; it will be erected at Sedalia, Missouri.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

The changing hues in the forest remind one that the summer is passing, and that fall, with all its changes, is near at hand, in fact, here already. Our contractors can eat something else besides pone and bacon, for the season has proved to be a reasonably profitable one. The figures of our Inspector of Buildings are very gratifying, and the total will exceed that of last year. Here are the amounts for seven months: Permits 1,424, total \$3,279,267, against 1,307 permits, and \$2,781,973 for same time in 1890. The season's work has not been interrupted by any serious strikes, and contractors seem busy.

Architects Crapsey & Brown report: For B. O. Elks, at Portsmouth, Ohio, a hall and store building; material, pressed brick, stone trimmings, tin roof, inside blinds, furniture, gas, plumbing, stained glass, furnace, etc.; cost \$20,000. Also plans for a church for the Methodist Episcopal congregation at Clifton (Cincinnati); materials, brick and frame, slate roof, stained glass, organ, church furniture, furnace, gas, plumbing, etc.; cost \$18,000. Also for the Presbyterian congregation at Winchester, Kentucky, a church; materials: pressed brick, slate roof, furniture, pews, furnace, stained glass, plumbing, gas, etc.; cost \$20,000.

Architect W. W. Franklin reports: For Charles Becker, a residence; materials: brick and frame, slate roof, furnace, gas, plumbing, mantels, stained glass, etc.; cost \$4,000.

Architect Nicolls, with Messrs. Bofinger & Hopkins, has prepared plans for C. B. Melish's residence; materials: pressed brick, slate roof, gas, furnace, stained glass, laundry fixtures, etc.; cost \$12,000.

Architects Des Jardins & Hayward report: For the Richmond (Ky.) Hotel Company, plans for a hotel; materials: common and pressed brick, slate roof, inside blinds, furnace, carpets, fixtures, etc.; cost \$20,000.

Architect A. O. Elzner reports: A residence for Max Lowenstein; materials, pressed brick, slate roof, blinds, gas, plumbing, furnace, stained glass, etc.; cost \$20,000. Also for Sigmund Reinstrom, a residence; materials: pressed brick, slate roof, furnace, plate and stained glass, grates, mantels, gas, plumbing, etc.; cost \$15,000.

Architects Aiken & Ketchum report: A store and flat building for C. B. Oglesby, at Middletown, Ohio; materials: brick, tin and slate roof, blinds, gas, plumbing, iron work, stained glass, etc.; cost \$18,000. Also for the Times-Star Company, an office building; materials: pressed brick, tin roof, elevators, steam heat, gas, plumbing, plate glass, etc.; cost \$50,000.

Architects S. Hannaford & Sons report: For J. H. Rhodes, a residence; materials: stone, slate roof, hardwood, furnace grates, mantels, plumbing, gas, stained glass, etc.; cost \$25,000.

Architect J. J. Rueckert reports: For Mrs. H. Holtz, a residence; materials: frame, slate roof, furnace, mantels, grates, gas, plumbing, stained glass, etc.; cost \$5,500.

Lucien F. Plympton, who is well known as an architect with artistic ideas, and M. R. Nash, son of the late A. C. Nash, a gentleman greatly beloved by the craft, have formed a partnership, and THE INLAND ARCHITECT takes them by the hand and wishes them "good luck."

Architect Louis Picket reports: A church, for the congregation of The Blessed Sacrament, Price Hill; materials: pressed brick, slate roof, furnace, gas, plumbing, stained glass, bells, etc.; cost \$15,000.

Architect George W. Rapp reports: For Gustave Willins, a residence; materials: pressed brick, slate roof, hardwood finish, gas, plumbing, stained glass, etc.; cost \$12,000.

Architect Gustave W. Drach has drawn plans for a residence for C. Hoppe, Cincinnati; materials: brick, slate roof, blinds, hardwood finish, mantels, plumbing, stained glass, etc.; cost \$5,000. Mr. Drach is also very busy on plans for Longview Asylum to be erected at Carthage, Ohio. This makes the second contract Mr. Drach has obtained to draw plans for additions to this now overcrowded asylum. This speaks well for him.

Cleveland, Ohio.—Architect A. M. Smith: For J. L. Severana, a two-story residence, size 32 by 50 feet, frame, stone foundation, slate roof; cost \$6,000.

Architect C. W. Hopkinson: For J. F. De Klyn, a two-story brick building, to cost \$20,000.

Denver, Colo.—Architects F. E. Edbrooke & Co.: For B. F. Woodward, a two-story business block, brick; cost \$35,000.

Architect J. J. Huddart: For S. M. Morrison, a two-story dwelling, on Elizabeth and Fourteenth streets, brick; cost \$12,000.

Detroit, Mich.—Architects Donaldson & Meier: For John J. Bagley & Co., a six-story brick block; to be erected on the corner of Bates and Larned streets. For the Park and Boulevard commissioners, a public bath house, on Beele Isle Park; cost \$14,500. For F. E. Mansfield, a two-story brick residence, on Forest avenue, between Cass and Second avenue.

Architects Mason & Rice: For Daniel J. Campan, additions and alterations to residence on South side of Jefferson avenue, near Ripelle street; cost \$10,000.

Architect Edward C. Van Leyen: For James Furguson, at Port Huron, Michigan, a two-story double house, frame, on Military avenue; cost \$6,000.

Also for W. S. Walker, additions and remodeling of brick residence on Lafayette avenue, between Sixth and Seventh streets; cost \$5,200.

Architects Hess & Raseman: For Mrs. C. Weitsell, a two-story double flat and store building, brick, on Michigan avenue; cost \$7,000. For the Board of Public Works, two market buildings; sizes 532 by 135 feet and 384 by 272 feet respectively; cost \$40,000.

Architects A. C. Varney & Co.: For the Odd Fellows Hall and post office, at Elk Rapids, Michigan, a block of two-story brick houses; cost \$6,000.

Architect Harry J. Rill: For K. Scheil, a three-story brick and stone residence, on Lansing avenue and Sixth streets; cost \$7,000. Also for F. Chambe, a three-story brick, store and flat building, on Grand River and Twelfth streets; cost \$6,500.

Architect Peter Dedericks, Jr.: For J. F. Ruhl, a two-story brick residence, on the corner of Madison avenue and Randolph street; cost \$7,500.

Architect George W. Meyers: For Mrs. E. Yerdell, a two-story residence, brick and stone trimmed; to be erected on Lincoln and Merrick avenues; cost \$5,000. Also for Mrs. M. A. Smoots, a two-story residence, frame, on Fort street and Elmwood avenue; cost \$5,500.

Architects E. A. Walsh & Son: For Robert J. Wilson, nine two and one-half story brick residences, on Hancock avenue and John R. street; cost \$12,000. For Samuel Furguson, a two-story brick summer house, at Grasse Point, Michigan; cost \$5,000. For Mrs. M. Maher, a two-story residence, brick and stone, on Trumbull avenue and Labrasse street; cost \$10,000.

Architects John Scott & Co.: For William P. Holliday, a six-story brick manufacturing building, on Fort street and Brush avenue; cost \$30,000.

Architect Albert E. French: For Robert J. Wilson, a two-story frame residence, on Frederick and Hastings streets; cost \$5,000.

Architect James Anderson: For Enoch W. Wiggins, a two-story residence, stone, with stone trimmings and slate roof, on Twelfth and Pine streets; cost \$6,500.

Architect E. W. Arnold; For Harvey C. Parke, a two-story brick stable, on Woodward and Canfield avenues; cost \$5,000.

Kansas City, Mo.—Architects James & James; For J. M. Piper, a three-story store and apartment building, brick; cost \$26,000. For P. S. Brown, a brick business block on Main street; cost \$12,000. Also for Baker & Breslin, a brick business building; to cost \$12,000.

Louisville, Ky.—Architect W. L. Wilson reports: Dwelling, frame, for Mrs. Johanna Pinsler; slate roof, and all modern improvements; cost \$5,000. Dwelling, Z. A. Carson, two-and-one-half stories; brick and stone trimmings, slate roof, plate glass and heater; to cost \$5,600; John Baumster & Bro., contractors. Dwelling, for Henry Kreamer; brick, two-and-one-half stories, slate roof, red sandstone trimmings, plate glass, steam heat; to cost \$6,000; George Ronnel, contractor. Improving residence for himself, on Third avenue; to cost \$5,000; pressed brick front, red stone trimmings, plate glass, steam heat; building under way. Dwelling for Miss Irene E. White, two-and-one-half stories, first story red sandstone, remainder brick, plate glass, metal roof, electric bells and speaking tubes and all modern improvements; cost \$7,000; Loeitz and Frey, contractors. Preparing plans for O. H. Irvin; to cost \$5,000. Taking bid on dwelling for Lewis Butterwick; cost about \$5,600; to be started at once. Residence for Lewis Nord; cost \$8,000; all modern improvements; not let.

Architects Deach & Thomas report: Music room and library for Theodore Harris, Fourth avenue; cost \$7,200; brick, hardwood finish and art glass. For Mike Muldoon, addition to residence, two stories, brick, stone and art glass; to cost \$4,500; located on New Broadway. For John Doerhoefer, double tenement house, located on West Jefferson street; cost \$8,500; pressed brick, slated roof, stone and terra cotta. St. Mary's Church, New Albany, Indiana; cemetery vault of stone, slate roof, art glass, fireproof throughout; cost \$4,800.

Architects Caldwell & Galvin: Residence for W. G. Hamilton; cost \$9,000; Breckinridge between Second and Third streets; two-and-one-half stories, metal roof, stone, brick and terra cotta. Residence for H. Boegershausen, frame; to cost \$4,500; on Chestnut near Twenty-fourth street; two stories and attic, shingle roof; contractor, W. F. Pancke. Dwelling for A. M. Offert; two residences, Second near Oak streets; cost \$11,000; S. M. Williams, contractor; brick, stone and terra cotta, slate and metal roof, two-and-one-half stories. Addition to Madison Street School House; cost \$8,500; brick and terra cotta, three stories, steam heat.

Milwaukee, Wis.—Architect A. Messmer: For Charles Rotti, a three-story store and dwelling, size 25 by 100 feet, brick and stone; cost \$8,000.

Architects Ferry & Clas: For C. F. Manegold, a three-story residence, size 50 by 76 feet, brick, with stone foundations, slate roof; cost \$25,000.

Architect Charles Kirchoff: For E. Werethoff, a two-story dwelling, size 36 by 60 feet, brick, stone, slate roof; cost \$7,000.

Architect C. F. Ringer: For George Schulz, a two-story residence, size 40 by 60 feet, brick with stone trimmings and all modern improvements; cost \$12,000.

Architects Fred. Koch & Co. have prepared plans for three-story hotel, brick, at South Milwaukee; to cost \$10,000.

Minneapolis, Minn.—Architect Harry W. Jones reports: Plans completed for a five-story block of stores for Haywood & Boshart, to cost \$60,000. The building will be on Nicollet avenue, between Eighth and Ninth streets, and will be of red pressed brick, with brownstone trimmings. Also, the new Achard building, on First avenue, South and Seventh street, to cost \$20,000. Also twenty-five houses at St. Louis park, for the St. Louis Park Association, at prices from \$1,000 to \$3,000. Also a frame pavilion at Lake Harriet, to cost \$20,000. An inebriates' home at Rest Island, Minnesota, to be of frame, costing \$15,000. Mr. Jones has also contracts for plans for a \$15,000 court house in Traverse county, a \$10,000 town hall at Gaylord, and an \$8,000 bank at Litchfield, Minnesota.

Architects Warren & Hayes reports the new Centenary Church, now under construction, costing \$125,000; the First Presbyterian Church, at Madison, Wisconsin, for \$35,000; a Congregational Church, at Oconomowoc, Wisconsin, for \$25,000; also a church at Menominee, Wisconsin, for \$25,000. Mr. Hayes is also architect of the First Presbyterian Church, at Mankato, Minnesota, to be of native Mankato stone, and cost \$55,000.

Long & Kees report considerable work, most of which is under way. They are architects of the court house and city hall, \$2,500,000; the Farmers' and Mechanics' Bank, \$100,000; alterations on the Syndicate block, \$20,000; repairs on the Lumber Exchange block, \$175,000. Their principal new contract is the Second Presbyterian Church, at Memphis, Tennessee, to cost \$100,000, and to be of brick and stone.

G. W. and F. D. Orff report a \$30,000 stone residence for C. H. Pratt, on Park avenue between Twenty-seventh and Twenty-eighth streets; a residence for B. F. Franklin, on Portland avenue and Thirty-second street, to cost \$6,000; one for J. Halloran, on Cedar Lake road, for \$8,000; one J. H. McDonald, on Tenth avenue, southeast, and Third street; for C. H. Bailey, a block of three stores on Riverside avenue and Fourth street, two stories, to cost \$11,000.

Pittsburgh, Pa.—Architect Charles Bickel: For Davis & Watson, a four-story, brick store and hall, to cost \$77,500.

Architects Longfellow, Alden & Harlow, of Boston: For J. J. Vandergrift, a six-story office building, size 60 by 80 feet, brick and stone.

Architect J. P. Brennan has prepared plans for a two-story convent at McKeesport, brick, tin roof; cost \$35,000.

Architect L. J. Osterling: For William H. Herron, a two-story residence, frame, to cost \$10,000.

St. Louis, Mo.—Architect J. G. Cairns: For Mr. Cloud, a two-story frame residence; size 46 by 63 feet, shingle roof; cost \$10,000.

Architects James Stewart & Co.: For R. E. Ricker, a three-story residence; size 30 by 50 feet; brick and frame; cost \$14,000.

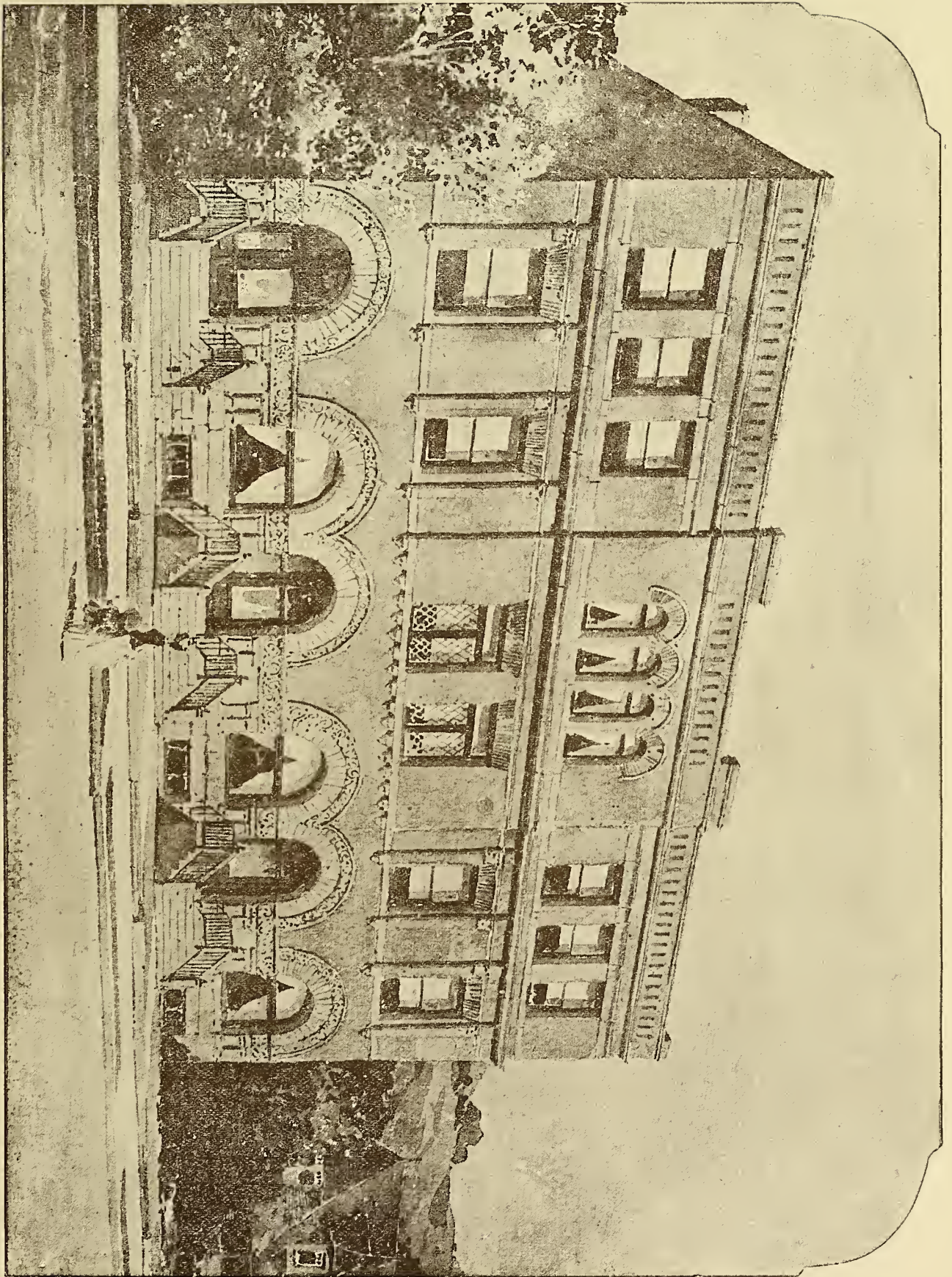
Architect Charles E. Illsley: For the Lucas Avenue Presbyterian Church, a one-story church, stone; cost \$50,000.

Architects Eames & Young: For G. G. Chapman, a seven-story store building; size 54 by 125 feet; stone and terra cotta, iron roof; cost \$80,000.

Architect E. C. Janssen: For Otto E. Bachs, a two-story residence; size 41 by 30 feet; brick, stone foundations and trimmings, slate roof; cost \$6,000.

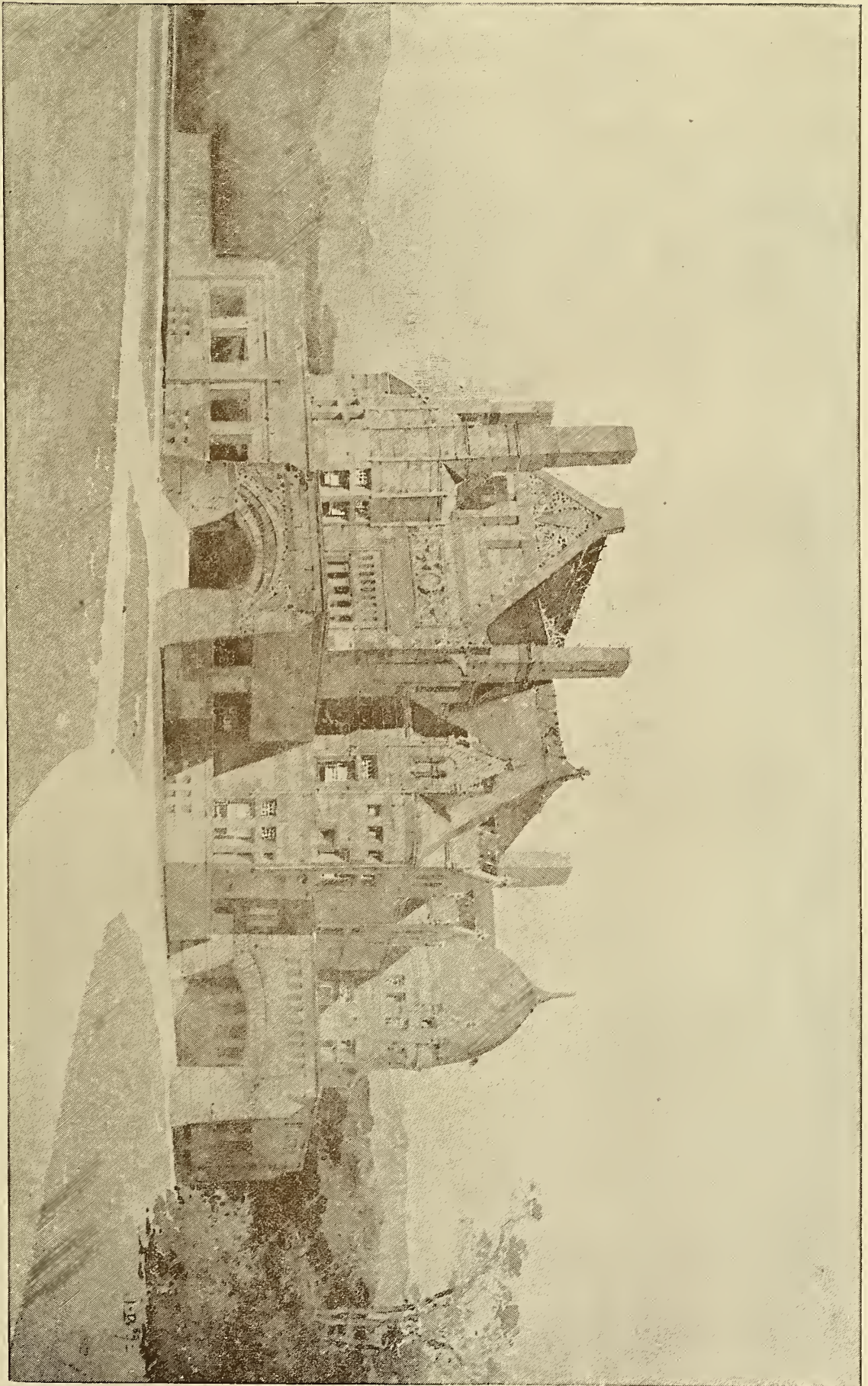
Architects E. Jungensfeld & Co.: For A. Busch, two two-story dwellings; size 50 by 60 feet, pressed brick, stone foundations, slate roof; cost \$75,000.

Tacoma, Wash.—Architects Pickles & Sutton: For Mr. J. S. Baker, a two-story business building, on Eleventh street and Pacific avenue, brick, stone trimmings; cost \$60,000.



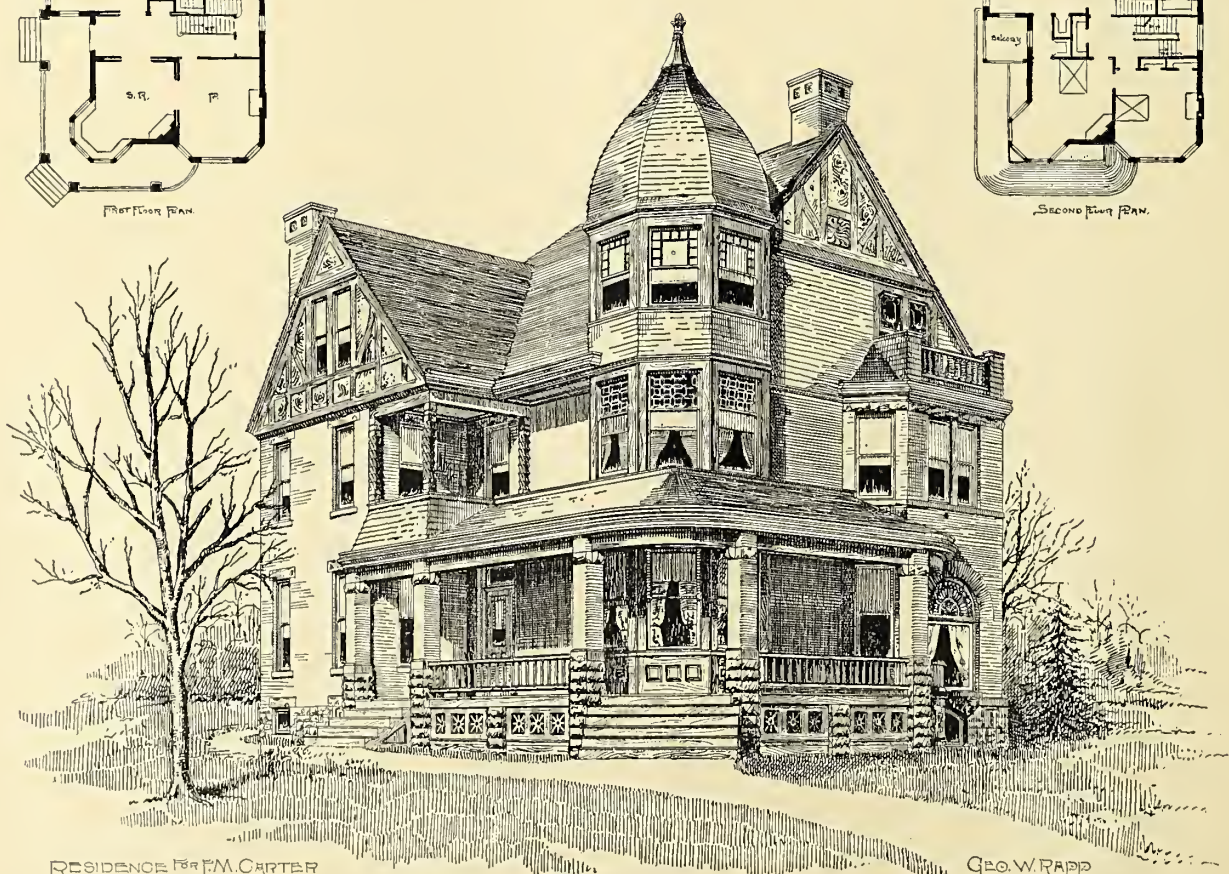
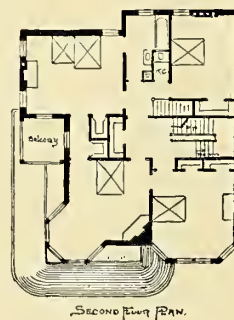
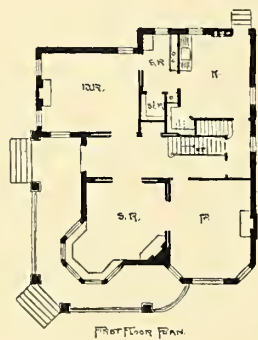
BLOCK OF HOUSES FOR JAMES W. SAVAGE, OMAHA, NEB.

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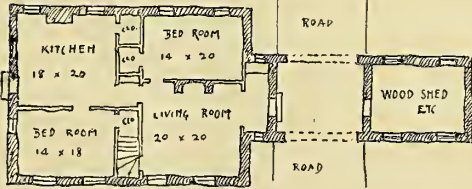
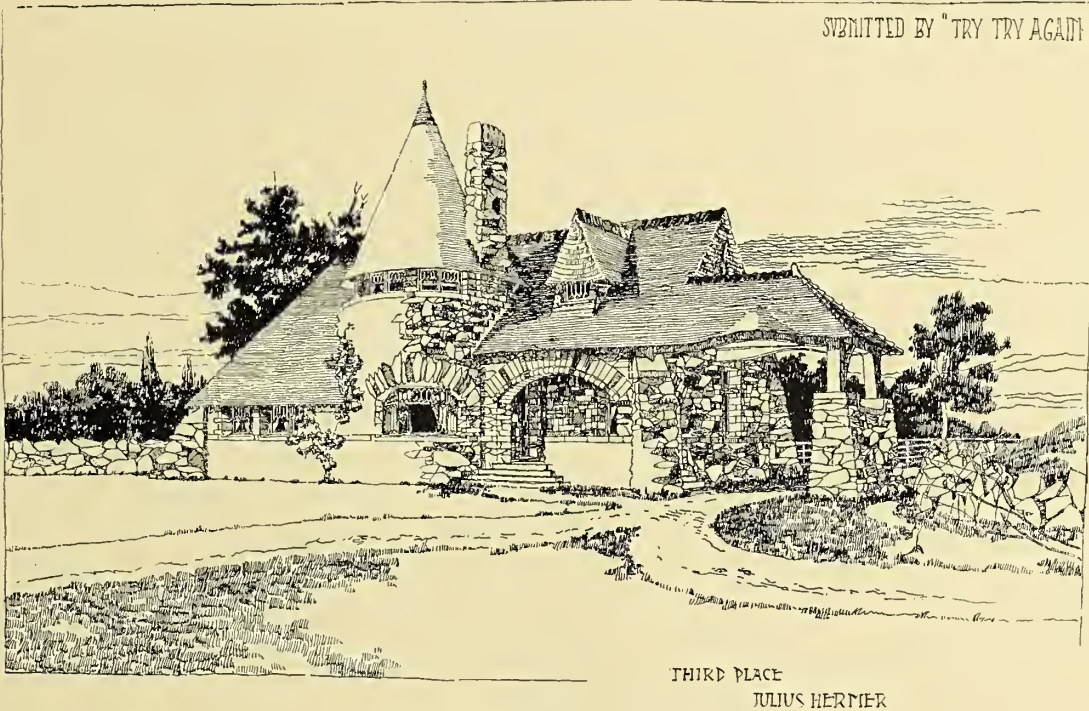
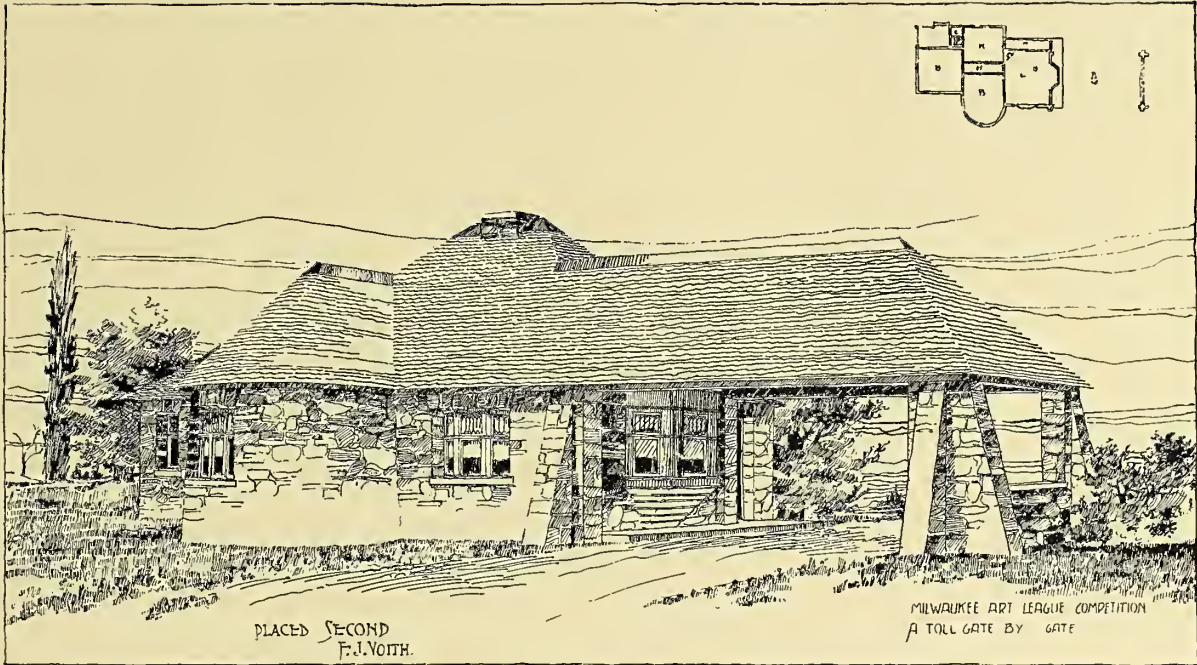
DESIGN FOR A RESIDENCE AT OMAHA, NEB.

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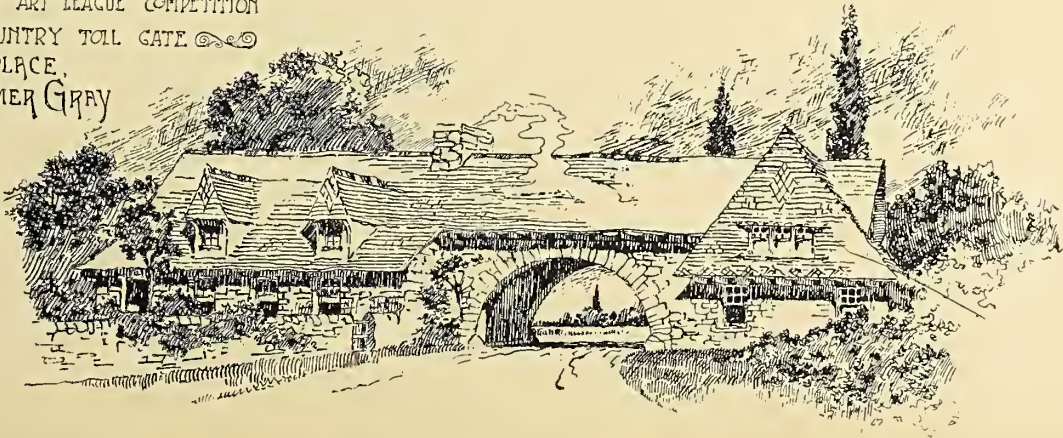


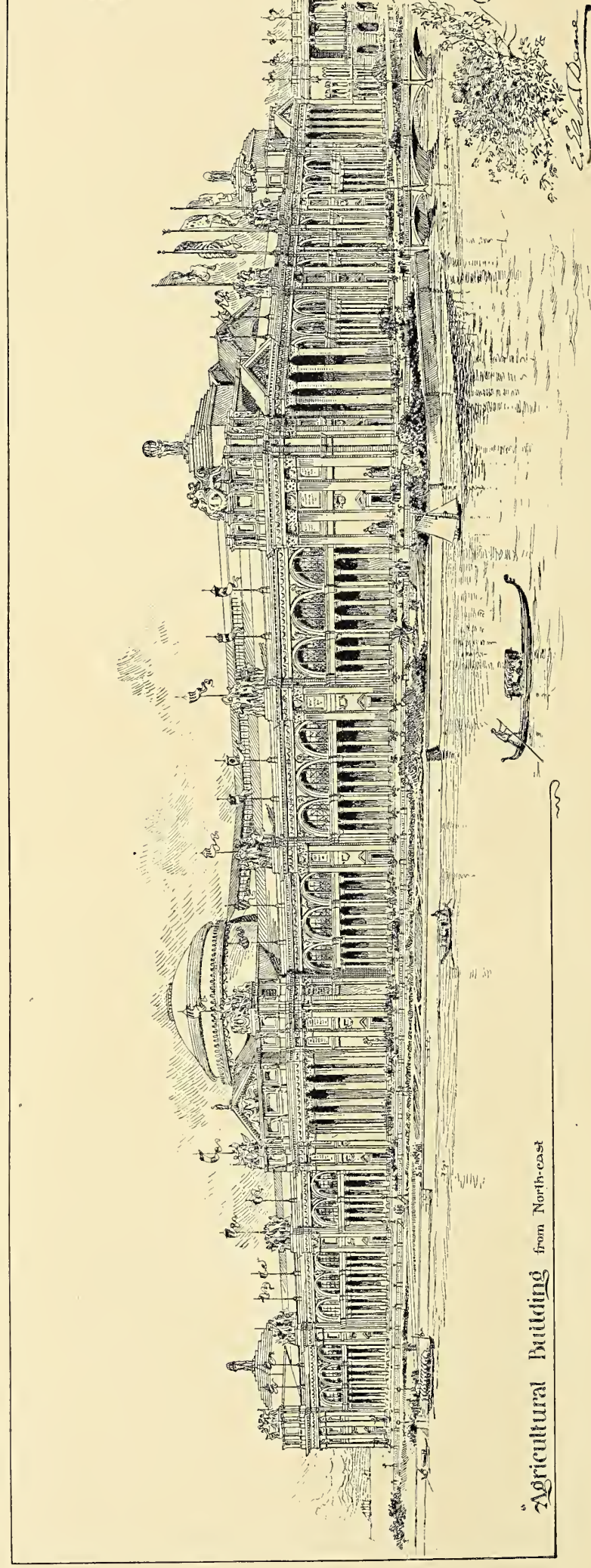
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SKETCH PLAN
MILWAUKEE ART LEAGUE COMPETITION
FOR A COUNTRY TOLL GATE
FIRST PLACE.
ELMER GRAY

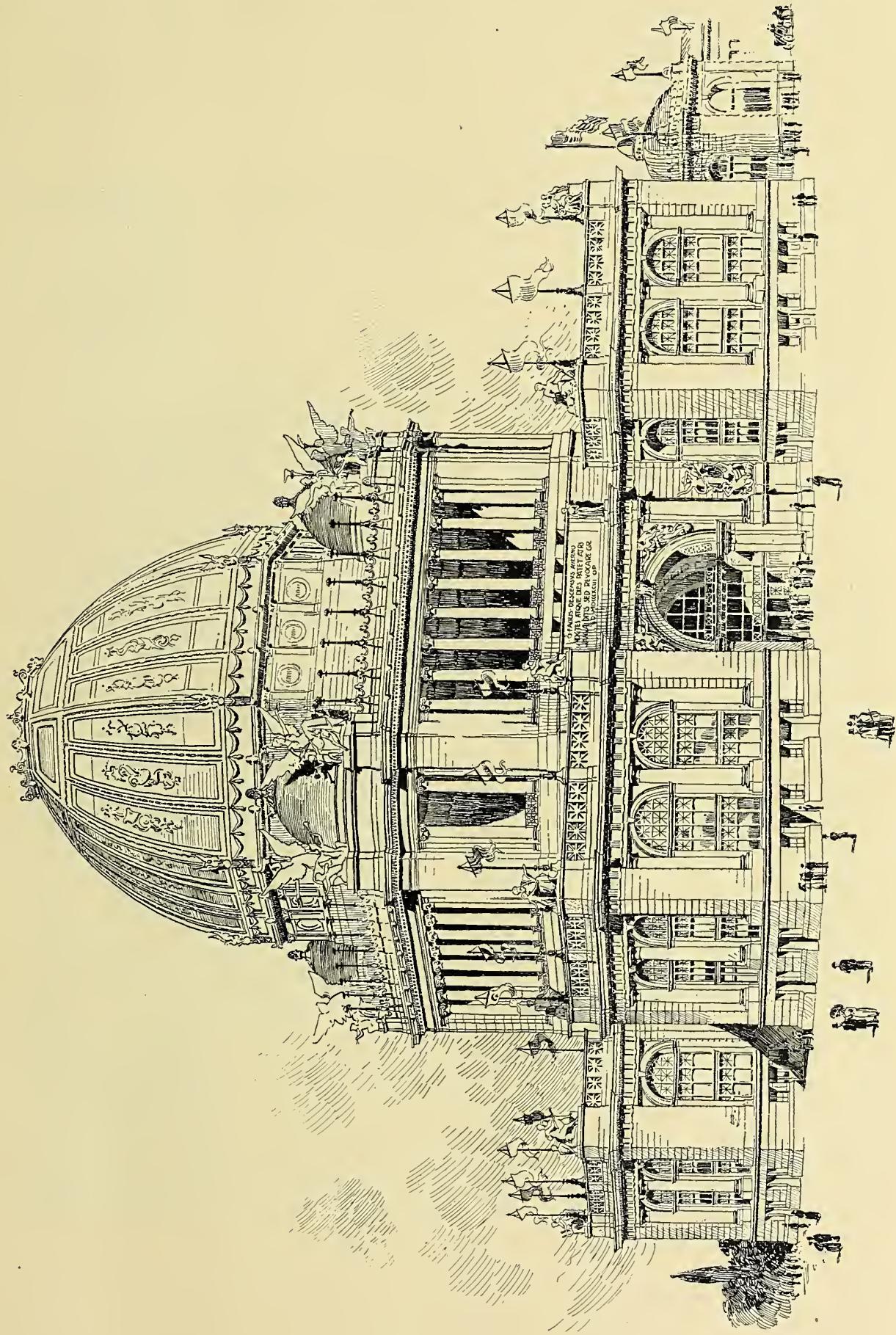




"Agricultural Building" from North-east

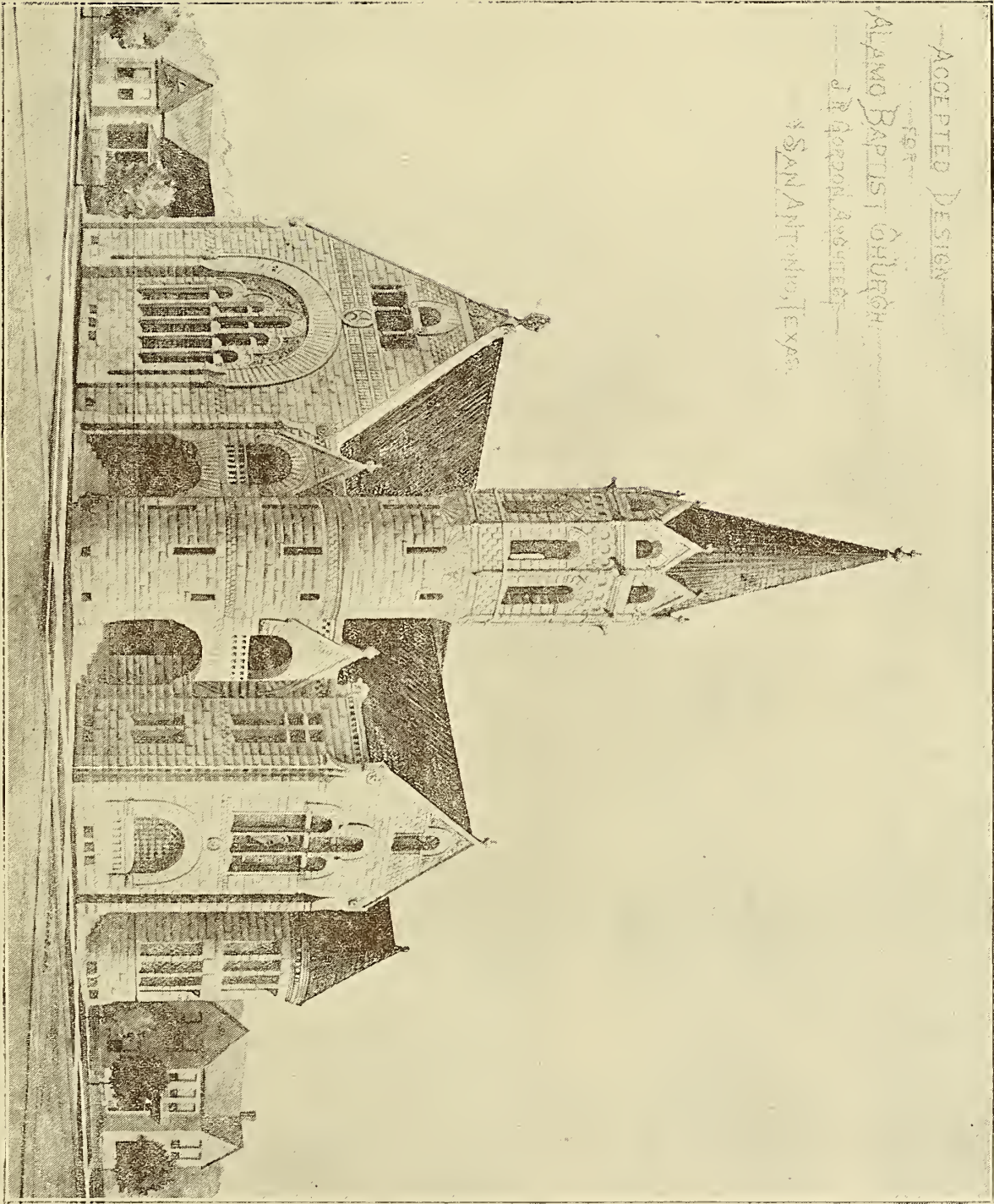
AGRICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, SEPTEMBER, 1891.

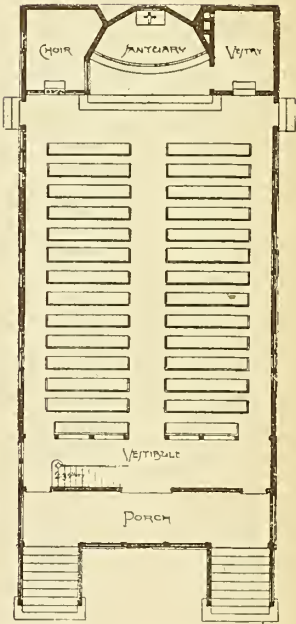
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ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, SEPTEMBER, 1891.

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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

OCTOBER, 1891.

No. 3

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to
ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photo-gravures), 75c. Intermediate number, 10c. Advance payment required.

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Twenty-fifth
Annual
Convention
of the A. I. A.

Notwithstanding the fact that some members of the American Institute of Architects have forgotten that the twenty-fifth annual con-vention will be held at Boston, Massachu-setts, October 28, 29 and 30, and made engagements that will prevent their attendance, and that others will be too busy to attend, the convention will probably be the largest and most important held in many years. It is the commence-ment of another twenty-five years of architectural progress, and brings with it many changes. The exhibit of drawings will illustrate the best work of the best architects of the land. The discussions will develop the best thought of these architects, and the freedom of thought that has developed in the West will meet the conservatism of the East. Each will be benefited by an exchange that will widen the scope of each intellect, and solidify into concrete form those impressions each has received yet set aside during the haste to accomplish rather than do well, which characterizes too much of the work of the present day. Though it involves an outlay of considerable time and money for the western architect to attend a meeting on the seaboard, and it is hoped that sometime this may be regulated by holding the annual meetings at a more central point, still the knowledge gained and the enjoy-ment obtained makes it worth the sacrifice. The secretary has obtained concessions from railroads and the local committee special rates from hotels, and the latter has prepared an elaborate programme which will keep members fully employed out of convention hours. There will be nothing formal in the arrangements, and the large member-ship of the Chapter at Boston will enable the architects of that city to give every attention to their guests. As the next annual meeting will probably be held in the South, and this will be the most important gathering until the convention in Chicago in 1893, every member should make a special effort to attend. The latest circulars issued by the secretary and other information will be found in THE INLAND ARCHITECT for September, and upon another page in this issue.

World's
Fair
Work
and Progress.

Contracts for all the principal buildings for the World's Columbian Exposition have been let and several of the buildings are constructed up to the roof line. The excel-lent management which has attended the planning and construction of these enormous buildings should excite the admiration of the profession and the public alike. To the latter it should prove for all time that the selection of an architect of known capability is better than a competition adjudicated by laymen. The policy pursued leaves nothing to be regretted by the public, as they have employed the best talent in the country, and whatever the result may be it will represent the best that the country can produce. The completed designs will prove, we think, that while the United States has never yet developed the greatest artists or the greatest musicians, that its architects are peers to those of the world. In the construction of these buildings, covering more than a thousand acres of space, the chief of construction has carried on the work with a systematic persistence against obstacles and a freedom from delay that should show that great architects are also great man-agers, and that a business faculty always augments an

architectural talent. It is hoped that the reported proposed abolition of the Bureau of Publicity and Promotion is not seriously considered. As the construction department has been active in erecting the buildings, so has this bureau been energetic and done valuable work in securing the attention of the world and showing the manufacturers of every civilized country the advisability of being represented within the Exposition gates in the great competition of 1893. In fact each department, that of construction and of publicity, seems absolutely useless without the other, and if one should be abolished the other should also. It is only because sensational reports have been sent out that we notice this, as we do not believe for a moment that any such move as the abolition of so important a department at this time was even seriously contemplated.

The Clark Medal Competition of 1891. The third competition for the medal founded by Mr. Robert Clark, of Chicago, closed October 1, nine drawings being adjudicated by the committee. The subject was the drawing of some part of the Acropolis, leaving the selection of subject and method of rendering to the judgment of the draftsman. The following is the report of the committee to the Chicago Architectural Sketch Club, who are the conservators of the medal fund:

W. R. Gibb, Secretary, C. A. S. C.:

October 1, 1891.

DEAR SIR,—Your committee on the Clark medal begs leave to report as follows:

It has received drawings from nine competitors. The award of prizes is as follows:

First prize, motto, "Fair Greece, Sad Relic of Departed Worth," by George G. Will, of Omaha.

Second prize, motto, a classic ornament, by W. E. Pinkham, of San Francisco.

Third prize, motto, a wreath, by Frederick R. Hirsh, of New York.

Honorable mention for clever watercolor, by Hugh M. Garden, Chicago.

All the drawings are at this office awaiting your pleasure.

Very truly yours,

DANKMAR ADLER,
N. CLIFFORD RICKER.
LORADO TAFT,
S. A. TREAT,
HENRY IVES COBB.

It is somewhat surprising that so few competitors could be found for this medal among the draftsmen under thirty years of age in the United States. This may be due to several causes. A superior attractiveness in the league competition; the scholarly knowledge necessary to creditably delineate the subject, the mere copying of the subject from a photograph not being sufficient; and the busy season in some sections occupying the time of draftsmen to the exclusion of other work. This latter has been particularly true in Chicago. The draftsmen who sent in drawings are all to be congratulated upon their excellence, each having merit of a high order, the two highest prize drawings especially exercising the critical knowledge of the committee to the utmost in deciding which contained the larger merit.

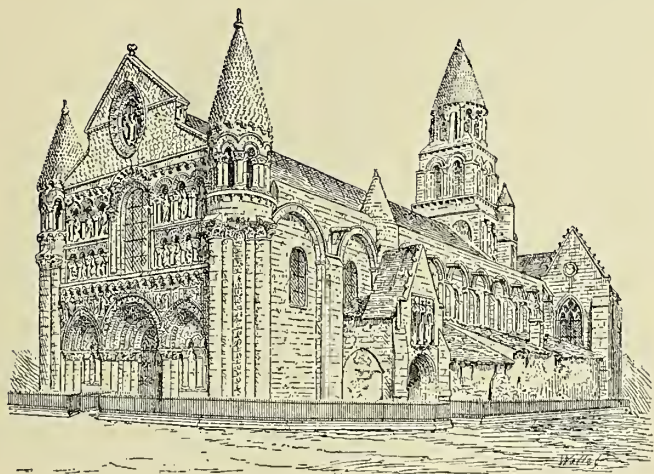
Candidates for Membership in the A. I. A. At the August meeting of the directors of the American Institute of Architects there was a larger number of applications for membership, and the average proficiency of candidates was higher than ever before. This is gratifying to the directors and it gives bright promise for the future of American architecture. The Institute now numbers about five hundred members, with good prospect for a rapid increase, notwithstanding the fact that the conditions of admission are more rigorous than they have been ever before.

Proposed
High Building
Ordinance
for Chicago.

The agitation of the subject of high buildings occupying the active attention of some owners, real estate men and politicians in Chicago at this time, is not new, nor is it, we think, apt to assume a serious aspect, and the discussion thereon must resemble that which attended the construction of the first railway engine. Then ignorance and self-interest denounced the terrible machine, and prophesied all sorts of evils should it become a general means of locomotion. Now the same elements are seeking to block the wheels of progress and metropolitan growth with much less excuse or apparent reason. A "high" building, it may be assumed, means one that permanently shuts the sunlight from a street, and this should certainly be avoided upon the score of health. In this one point alone have all the arguments by those who advocate a preventive ordinance an atom of force. It is certainly no argument that they may fall down; for any building weakened by the parsimony of the owner, abetted by the ignorance of an architect, can do that, whether it be of four stories or forty. The present system of steel construction can hardly be improved upon for stability of structure, and a fireproof building, even though it be twenty stories in height, is certainly better than those of four or five stories which they replace that are dark, noisome and more than unhealthy to the occupant, and which, in case of fire, can burn to the ground in half an hour. If such an ordinance was passed there would be no incentive to owners to tear down these relics of a haste to obtain some sort of shelter which followed the great fire. The dangerous plan of adding two or three stories to the already weak walls would be resorted to, and the result would be the perpetuation of evils that the modern high building is slowly abolishing. The man who can calmly say, "Dearborn street will soon be so lined with high buildings that it will look like a tunnel," is either ignorant or foolish, as owners who have figured the problem with their architects know too well that the elevator space allowable limits the height of every building more effectually than any statute can, and therefore every lot has, through its rental value, its own limitation for the height of the building that may be put upon it. And even if all the allegations were true made by those who wish to see the Masonic Building remain the highest structure in Chicago, or the real estate man who would be pleased to see the city business scattered and a consequent rise in values in remote districts, it does not seem to us that any amount of high buildings constructed upon modern principles could be one-half as dangerous from a sanitary standpoint as those in which Chicago does business today, and which are gradually being replaced. The safety of foundations has been amply tested, the engineers of the world have looked with admiration upon the system of steel construction in vogue, and it is much too early to provide against a contingency so remote as the possible crowding together of high structures, when many circumstances can in the interval so deflect the lines of trade as to spread it into other sections of the city. If the city council will order the appointment of capable inspectors who are not politicians, but who are recommended by architects of standing, and organize a special inspection for all high buildings and not seek to abridge but to invite the investment of capital, it will do something toward protecting and benefiting the public, though it may displease those few who having completed high buildings now seek to deprive their neighbors of a like privilege.

Architecture and the Allied Arts.

BY BARR FERREE.



CHURCH OF NOTRE DAME, POITIERS.

PART IV.—Continued.

IN Italy there is the same uncertainty in the handling of materials that is characteristic of French Romanesque architecture. An especially marked school is illustrated in the façade of the cathedral of Pisa, with its series of arcades. It enjoyed a wide popularity, and was repeated in other churches of the same epoch. In southern Italy a great variety is found. The doorways, as in the church of San Nicolo, at Bari, often have a porch, with columns supported on the backs of lions, and in Sicily a rich form of ornamental architecture is illustrated in the cathedrals of Monreale and Palermo, due to Moorish influences. In these churches, both mosaic and painting are used as decorative features, with characteristic and unique effects.

Gothic is the latest of the original forms of architecture; not that it stands alone, and originated spontaneously, for it had its origin in a development of older forms, and in its decadence did not merge into another style. Since its collapse, art has been simply a revival and reproduction of other styles. It has, therefore, an interest that is unique in the history of art. The church naturally became the center of all the art life of the people at a time when art was the sole outlet for the expression of genius. Talent was forced in the one direction of the decoration of buildings, which thus represented the best art of the age. This, of itself, is sufficient to account for the intimate union of all the arts in Gothic structures. Whether the architect was always painter and sculptor, as well as master builder, is immaterial, but while there are instances where the style commenced at one time is not carried out to the conclusion, there is abundant evidence that each work has been undertaken in a genuine spirit of having a complete and well-adjusted whole. Many of the cathedrals are so large, and the period covered by their erection was so long, that there must be cases where the methods chosen for one part of the wall could not be carried out on the adjoining space. Frequently the decoration given at one time was effaced, and an entirely new system devised.

A Gothic church offered opportunities for decoration that were far in advance of those in other previous styles. While paid for by funds controlled by one central authority, whether the bishop or a religious or civil body, it was erected under the immediate supervision of the master builder. Frequently, owing to the size of the edifice and the length of time consumed in its construction, due sometimes to lack of funds to carry it on continuously, sometimes to the gigantic nature of the work in hand, a succession of master workmen were required in order to complete it. There were opportunities for individual work in decoration which could never have been offered by the Greek temples, which were small, and finished within a comparatively short space of time. More than this, the great size of

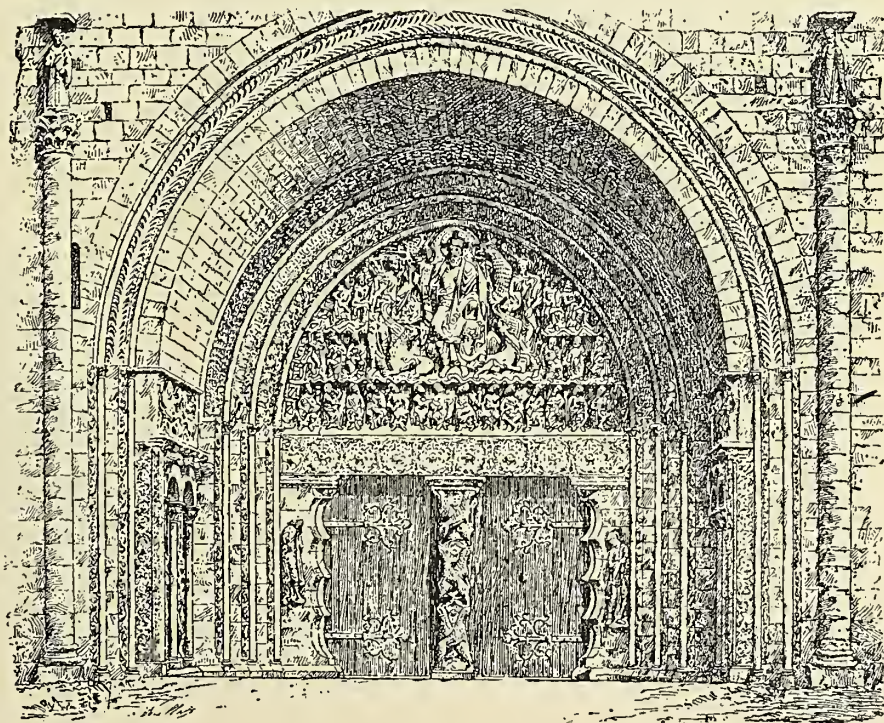
the Gothic structures permitted a variation of design in ornamentation that would have been out of place in a Greek temple, but which passed without comment in the vast space of a cathedral.

It was fortunate for Gothic art that the popular enthusiasm for religious and artistic matters was widely diffused. Had it been limited to a small clique or subjected to the caprice of fashion, the results would have been incongruous. In the middle ages large numbers of persons were, for several centuries, all actuated by the same fervor and enthusiasm. All worked in the same direction and followed the same guides, constantly striving after perfection, and were thoroughly animated with the importance of the work in hand. Thus it is that, while there is a pronounced individualism in a Gothic edifice of the first-class, the animating thought in the whole work is the same; though frequently spread over the space of several centuries. The crude carvings found in the most ancient part are but a feeble attempt to express the idea that afterward found perfect form in later work. There is a union, a bond, between all that makes it uniform in its very variability.

Absolute freedom of design, a total independence from the restraining bonds of symmetry or precedent, is the essential characteristic of Gothic architecture. Not that other styles were not free, not that they did not permit variation in form as necessity required, but in no other style was freedom so permissible, and in no other style was it so universally availed of. This is not only so as regards the architecture, but in the various kinds of decoration that were employed to ornament the structure. The completed Gothic—and, as we are not here concerned with tracing the evolution of art, it may be remarked once for all that we have to do only with the fullest development of the art—availed itself of all forms and all sorts and kinds of decoration. Sculpture, painting, mosaic, metals, glass, wood were employed in the greatest profusion and with the effect of producing results of almost unequaled brilliancy and grandeur.

Two great schools of Gothic decorations may be distinguished. Painted ornamentation is characteristic of the south of Italy, where the warm climate called for small window openings, and where, therefore, there were large wall spaces. The great masters of Italian painting were called to fill these vacancies, and the opportunities thus afforded them were of the utmost importance in hastening the development of painting in Italy.

In the North the colder temperature called for greater access of sunlight and the windows were larger, and in course of time became the most important feature in the decoration of the cathedral. Though there were numerous Gothic or pointed churches in Italy, it never



PORTAL AT MOISSAC.

there underwent the full and complete evolution that it experienced in the North.

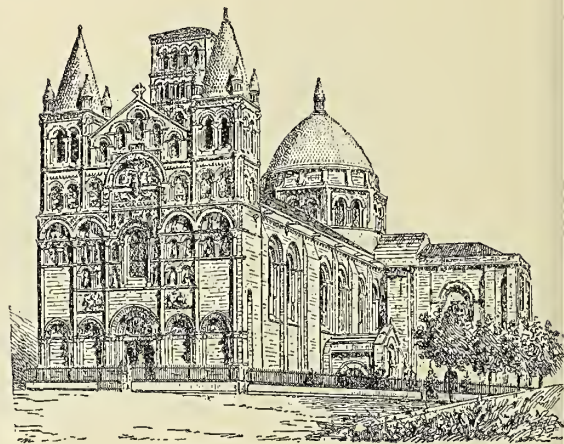
The Egyptians, as we have seen, covered the walls of their buildings with a brilliant mosaic of scenes from life; the Greeks apparently

used simple coatings of a single tint, though they likewise used wall paintings; the Gothic artists adopted a practice akin to that of the Egyptians, in so far as they likewise covered their walls with paintings of things sacred and secular. The methods and results differ largely from the Egyptian, but the idea of the decoration is the same. So fascinated did the Italians become with this grade of work that most of their greatest paintings are on the walls of the churches and other buildings. This development of wall painting was largely due to the influence of the maritime cities, which, being engaged in constant traffic with all parts of the world, brought to their native shores the best products of other lands.

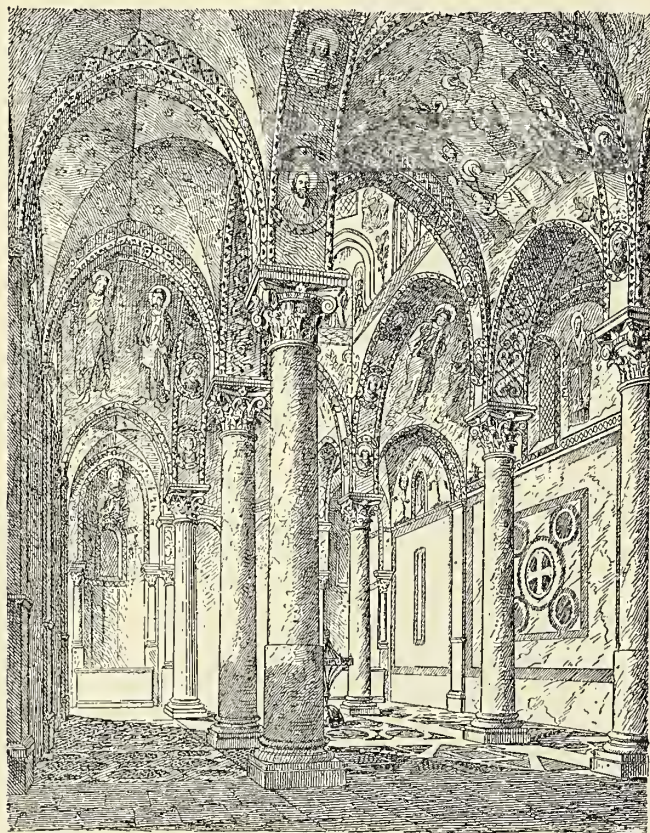
The unbroken surfaces of Italian churches offered unrivaled opportunities for the display of the painter's art, of which they were not slow to avail themselves. The church of San Angelo in Formis at Capua, is one of the earliest of Italian painted churches. The semi-circular tympanum over the door leading from the vestibule is decorated with a half-length figure of the archangel Michael. Other figures are placed on the same wall, and the sides are occupied with scenes from the legends of the hermits Paul and Anthony. Within the church a large part of the paintings have disappeared, but sufficient remain to show that the sides were covered with scenes from the Old Testament, and that the spandrels of the arches were also utilized for similar decoration, while over all were two rows of pictures from the New Testament. The apse is filled by Christ enthroned. The most important work of the entire series is the "Last Judgment," which occupies the entrance wall, and is one of

became the scene of the labors of the greatest of the early Italian masters, who covered the entire inner surface with their works. So completely did the paintings exhibit the best of Italian art, and so important are they in indicating a new life in painting, a casting off of the old rigid forms and methods of the Byzantines, that the architectural merits of the building have been almost neglected in the attention that has been concentrated on them. The Church of S. Francis, at Assisi, is an epitome of the history of Italian painting, and in a measure marks the dividing line between the dull, lifeless art of the middle ages and the invigorating development of the Renaissance. The paintings in this edifice are too numerous and too elaborate to be even catalogued here, and it is sufficient to point out that it is one of the best examples of the Italian method of architectural decoration.

The characteristics of the Italian Gothic or Giottesque style of mural decoration have been briefly epitomized by Mr. Waring ("Examples of Stained Glass, etc."): "A dado or base paneled with imitations of various marbles, contained within borders painted in imitation of the glass mosaic work known as *opus Grecanicum*, having at times central designs of intricate geometrical and leaf ornament. About six feet from the floor is a cornice with small brackets or consoles, all radiating in perspective to a central point of sight; above this the wall is divided into large compartments containing historical or religious figure subjects, the figures being strongly outlined and the colors flat and distinct, with but a slight use of *chiaro-oscuro*; these compartments are also enclosed in a painted mosaic border, and beneath each is a description of the subject illustrated written in peculiar Gothic letters of a very good style. The vaulting of the roof springs immediately from above these pictures, the only actual projection being one large central rib, ornamented with winding foliage and mosaic border, and painted moldings to carry it off more agreeably on to the flat surface of the vaulted compartments, which are almost always painted of a deep blue, studded with gold stars,



CATHEDRAL OF ANGOULEME.

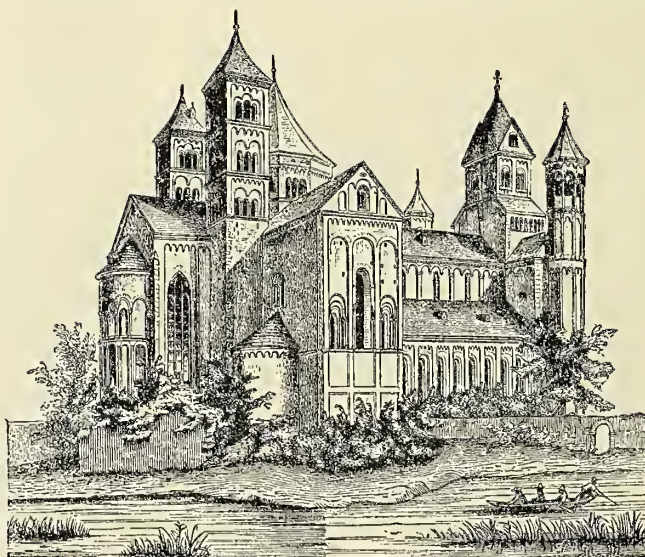


CHURCH OF LA MARTORANA, PALERMO.

the earliest representations of the most awful event in Christian theology. The whole decoration is one of the best examples of the early Italian method of covering an entire wall with one great scene and its connected events.

This work so admirably illustrates the Italian system of decoration that a brief synopsis of its component parts will add to a better understanding of the subject. The only openings in the wall are the doorway and three windows at the top, just under the roof. Christ seated in judgment occupies the center of the wall. Above, between the windows, are angels with shawms, and underneath a narrow frieze containing figures rising from the dead. On either side of the figure of Christ is an adoring angel, and below, the Apostles, seated. The tier under this, and immediately above the doorway, is occupied in the center by three angels, and on either side by the company of the blessed drawing away the lost souls in terror. To the right of the doorway is a representation of paradise, and to the left, one of hell.

The Church of S. Francis, at Assisi, consecrated in A. D. 1253, is a splendid example of an Italian decorated painted church. It



ABBAY-CHURCH AT LAACH.

and in the center of each of which are painted figures, usually holding written scrolls descriptive of their meaning. The intersection of the rib is marked by a gold boss, carved and gilt, but not of great size, having a ring in the center from which depended the lamp." This method has been generally followed in the works of Orcagna, at Pisa and Volterra, of the Lorenzetti and Bartoli, at Siena and other places, and applies generally, though with variations, to the works of Paolo Uccello, Masaccio, Ghirlandaio and Signorelli.

In the North, a different system prevailed, and wall paintings assumed a secondary position in decorative methods. The newly-invented art of painting on glass threw the older system out of use. Schemes of decoration embracing the whole of sacred history, beginning with the creation and ending with the last judgment, are in the form of sculpture, not in painting, as in the South.

Wall painting was used in the North as it was in the South, but less freely. Much of it has disappeared, but sufficient remains to show that it played a more important part than we have absolute knowledge of. With the progress of art it became less architectural and more purely decorative. Its natural function of adding to the beauty and grandeur of the church building was still unimpaired, though its form and manner of expression had changed. Italian cathedrals, as those of Siena and Orvieto, depended very largely on their wall paintings for their internal effects. The development of Italian art was so rapid, and the Gothic passed so swiftly

absence of a native body of painters prevented the use of wall painting to any extent. There is, however, evidence that wall painting was employed more or less in all Gothic churches.

Paintings were used on the exteriors as well as in the interiors of buildings. In some Italian churches it was used externally in conjunction with other forms, notably in the cathedrals of Siena and Orvieto. The practice was doubtless a survival of the ancient classic usage. It was also used so in the North. A number of German churches in Westphalia were thus ornamented. Here the buildings were especially intended for this decoration, the walls being plain and almost devoid of architectural features. The severity of the climate has acted unkindly toward the pictures and scarcely a vestige of them remains. The structures have little architectural merit and are among the most uninteresting in Europe. In this case the province of painting as ornament was exalted above construction or architecture, instead of, as in Italy, acting as an accessory. The employment of painted designs on exteriors might almost be said to have never died out. It is one of the survivals from remote antiquity that has exhibited many different phases but never been quite lost. It is not much practiced at the present day save in remote districts, but it has always been very popular. Its employment on the façades of the great Italian cathedrals show in what estimation it was held by the most cultured Italian communities.

(To be continued.)

Twenty-Fifth Annual Meeting of the A. I. A.

SECRETARY DANKMAR ADLER, of the American Institute of Architects, has issued a final circular letter to members, containing instructions and information regarding the annual convention to be held at Boston, October 28, 29 and 30, as follows:

AMERICAN INSTITUTE OF ARCHITECTS.

OFFICE OF THE SECRETARY.
1600 AUDITORIUM TOWER,
CHICAGO, October 13, 1891.

DEAR SIR,—As you have been before notified, the next convention of the American Institute of Architects will take place at Boston on the 28th, 29th and 30th of this month. The following arrangements have been made with the various trunk lines leading to Boston for carrying participants in the convention: Tickets to Boston must be paid for at regular fares. Purchasers of tickets should see to it that they receive from their local ticket agent a regular trunk line certificate for reduced fares, duly signed and stamped. This certificate will be endorsed by the secretary of the convention, and upon presentation of same at the railroad ticket office at Boston, a ticket to the place of starting will be sold at one-third fare. All this, however, is conditioned upon the purchase of railway tickets over the trunk lines by at least one hundred persons.

The Local Committee of Arrangements has determined that the headquarters of the convention shall be at the Copley Square Hotel, and that the convention itself will be held in a hall fitted up for its use in the new Public Library Building.

Besides the regular routine business of the convention, there will be presented to the institute a number of papers, which it is hoped will prove highly interesting, among them being one from Mr. W. L. B. Jenney, upon the construction of high fireproof buildings.

The Boston Society of Architects has most hospitably announced itself the host of the convention, and will in that capacity arrange a series of drives and excursions to points of interest in and about Boston, and also invites the members of the convention to a dinner on Thursday evening, and to several informal luncheons during the days of the convention.

The Institute of Technology and the Art Museum, as well as the Exhibition of Architectural Drawings of the Boston Society of Architects, will be open to the members of the Institute.

You will see from this that every possible effort will be put forth to make the coming convention a memorable one, and that it should be participated in by a full representation of our membership.

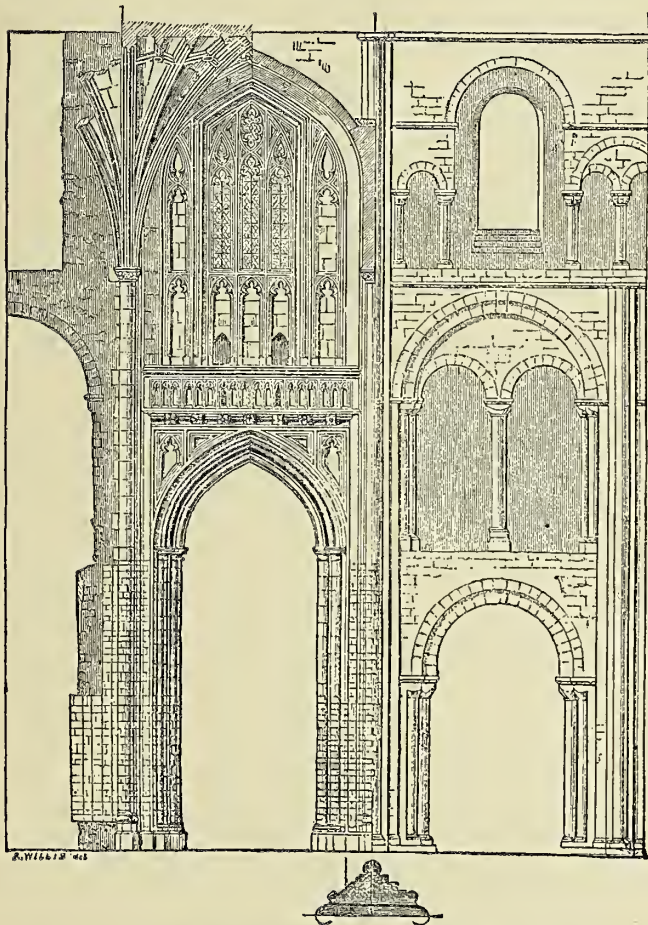
Applications for rooms should be made at once to Charles W. Parker, Copley Square Hotel, Boston, Massachusetts. The price of rooms on the American plan is from \$4.00 upward; on the European plan from \$1.00 upward.

It would be well if those coming to the convention were to arrange to come in as large bodies as possible so as to avail themselves of the offers of railway companies to furnish special sleeping cars for their accommodation.

Very truly yours,

DANKMAR ADLER, Secretary.

The trunk lines in the territory covered by the Boston Passenger Committee, the New York and Boston Lines Committee, the Trunk Line Association, the Central Traffic Association and the Western Traffic Association have granted a one and one-third rate upon the certificate plan. Architects from the large cities can now organize in parties and obtain special cars where the number is sufficient to warrant. Those members west and south of Cincinnati can gather at that point, and go over the Chesapeake & Ohio railway. Those of Chicago and westward are offered special cars and accommodations by the Grand Trunk railway, and are given a choice of route via Montreal or Niagara Falls and stop-over privileges at these points for those who wish to avail themselves of the privilege. The route via Montreal is recommended and will probably be chosen by the larger number of members. In order that a special car or cars may



ALTERATION IN WINCHESTER CATHEDRAL.

into the first stages of the Renaissance, that many structures decorated in the Italian style belong to a later form of art than we are now considering.

The walls of some Romanesque churches in the North were decorated with paintings. The earliest work bears a resemblance to mosaic in the form and subject matter. It was usually on a blue ground, and was sometimes inclosed in a painted architectural framework. The paintings in the baptistery of S. Gereon at Cologne are excellent examples of the general appearance of this work. Here Christ, between Mary and John the Baptist, occupies the space over the altar, and painted arcades along the walls contain figures of bishops and saints. The transept and choir of the cathedral at Brunswick contain one of the largest and most important series of paintings in the earlier style.

The records of Italian churches have preserved the names of many painters who have added to their beauty, but few names have survived in the North. This was because there was no well-defined or influential school of painting out of Italy. The French cathedrals, which take rank among the most poetical and artistic structures ever erected, as well as among the very finest of architectural creations, were built at a time when French painting, as a national school or a considerable body of painters, was not in existence. The art thought of the people was expressed architecturally, while in the South it was exhibited in painting. In Germany, much the same condition is to be noted, though German painting developed more rapidly than French. In England, the

be provided, those who intend going by this route either from Chicago or westward of that point should notify the secretary as many days as possible before starting. As this line runs the only Pullman coaches between Chicago and Boston and the country traversed by the line is most picturesque, the journey, especially if taken by a large party of acquaintances, should be a memorable one.

Mr. Rapp or Mr. Crapsey, of Cincinnati, can be communicated with at that point, and will organize a similar party if a sufficient number of names are received to warrant.

As a large number of members will start either from Chicago or Cincinnati the following time table will show the departure of trains from those points and the time of arrival at Boston:

TIME TABLE.

Grand Trunk Railway, via Montreal, leaves Chicago 3:00 P.M.; arrives at Toronto 8:27 A.M., at Montreal 8:10 P.M., at Boston 8:15 A.M. Via Niagara Falls, leaves Chicago 8:15 P.M.; arrives at Buffalo, 9:00 A.M., at Boston 9:50 A.M.

Michigan Central Railway, leaves Chicago at 2:20 P.M.; arrives at Boston 5:40 P.M.; leaves 10:10 P.M.; arrives 10:45 P.M.

Lake Shore & Michigan Southern Railway, leaves Chicago at 10:30 P.M.; arrives at Boston 3:40 P.M.

Notes from our French Exchanges.*

THE VANDALISM OF THE CLERGY.

UNDER this title M. Blanchpierre, in *La Semaine des Constructeurs*, writes: "I formerly knew an old-fashioned but learned architect, with whom I made an excursion into Lower Brittany. He was an enthusiast and admirer of our old French art, so much so, indeed, that he might today be called 'a crank' upon that subject, but withal one of the most agreeable traveling companions in the world.

"Almost broken-hearted at the mutilations and destruction which we encountered at each step, he conceived the plan of a great literary work which he should call the Vandalism of the Clergy. Full of his subject, he pushed the matter to the extreme limit of asserting that the famous hammer of the revolutionists was a myth, and that all the destruction of statues, stained glass and carving which we constantly noticed on this trip was the work not of the legendary Jacobins, of whom history preserves no record in that part of the country, but of the very clergy themselves. These latter, pushed on by an exaggerated zeal, and backed by the writings of the Old Testament, had destroyed since the eighteenth century all the naive images carved by an ignorant people. 'Did they not officially destroy in the Isle de France,' said he, warming himself up to the subject, 'the rood-screen of the Cathedral of Paris, and also that of the Cathedral of Chartres? Did they not break out the stained glass in the windows of Notre Dame to replace it by clear glass? These facts are authenticated, and all the objects destroyed by these men are incalculable.' 'I have made a list,' continued my worthy architect, 'of these devastations, and the number is already great. The true revolutionary hammer is that of the monks of 1650 and 1715, who were passionate students of the Old Testament, and called the Gothic art the gewgaws of Arab art.'

"I will not try to repeat all the subtle observations which he made to me during this excursion, but from these observations there resulted one fact undeniable to me, namely: That under a pretext of restoration, and pushed by a desire to make all these old sanctuaries as much as possible after the present styles in vogue, the poor priests of these modest churches had destroyed in that part of the country hundreds of extremely curious things which ought to have been preserved forever.

"The remembrance of my friend, the antiquarian architect, has recently been called to my mind afresh *à propos* of the proposition to freshen up the famous frescoes of Michael Angelo in the Sistine Chapel, as proposed by his Holiness, Leo XIII. To restore the Last Judgment is to destroy it. The terrifying vision of the painter of the Sibyls may not be appreciated by the modern bigots who are devoted to Virgin Marys dressed in blue, and to the apparition of Lourdes; but nevertheless it is an immortal page in the history of art which ought before everything to be respected. We know what the Italian painters of this century made out of Leonardo de Vinci's Lord's Supper, and it is not without the greatest apprehension that one thinks what they might do with the immense fresco of the Sistine. To touch it up and repaint it would be a veritable profanation. May heaven prevent the Pope setting out to make restorations of the sublime works of the great artists of the renaissance, who made celebrated the reigns of his predecessors. Following in his footsteps all the clergy of the universe would probably try to imitate him, and even those works of our ancestors which now remain intact would then disappear, restored in the imitation of the basilicas of great Rome.

"Fortunately, however, Leo XIII is in the habit of consulting the opinion of the christianity which he directs before making a decision, so that in the face of the protestations which cannot fail to be made in reference to the restoration of the Sistine Chapel he probably will hesitate. The restoration by modern painters of the Last Judgment of Michael Angelo would be the formal consecration and authorization of what my friend so aptly called the vandalism of the clergy."

TESTS FOR SLATE.

Last year there was an important suit brought at Vienna against a contractor who, amongst other things, was accused of having used slate of a poor quality in roofing a large block of houses. The court ordered an expert report made upon this point by a distinguished

chemist, and the following is a generalization of the conclusions of this expert, who did not entirely rely upon the common tests.

It appears that generally in slate there is a system of extremely fine lines parallel to the planes of crystallization. By bringing a slate near to the eye, and examining it carefully at a certain angle, these lines may be seen. A properly cut slate should have the long sides parallel to these lines, and if not so it is extremely probable that the slate will flake off or break upon the slightest provocation, even if the slate itself should be of a good quality.

The belief that the specific gravity of a slate gives any measure of its quality is false.

The test by sound is a good one. Slates of good quality struck together, or against a piece of metal, give out a clear sound, while poor ones, on the contrary, give forth a heavy, dull sound.

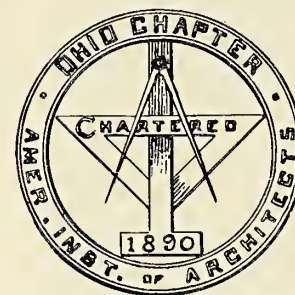
The well-known experiment, which consists of suspending a slate so as to just touch water, and then noting to what height the fluid mounts by capillary attraction, is a good indication of the quality, since, if good, the water will ascend only a few millimeters, but if it goes up any considerable distance the stone will certainly succumb to frost, sleet and action of the elements.

However, there are some slates which will not absorb water, but which, nevertheless, slowly decompose under the action of the air. Such varieties may be recognized by means of sulphuric acid. A piece of this slate being put in a testing tube, the tube should be filled with a saturated solution of the acid, and after several days a poor quality will always be more or less eaten, while a good specimen will not be attacked for weeks, and sometimes even months.

If a slate, after having been first pulverized, is treated with hydrochloric acid and strongly effervesces, it contains carbonate of lime, and should not be employed.

If pulverized and heated in a testing tube, it gives out an odor of sulphuric acid, and gives a sublimate of sulphur; such slate contains iron pyrites, and should not be used, since all these varieties disintegrate by exposure in the air, the same as the preceding.—*La Semaine des Constructeurs*.

Sixth Annual Meeting Ohio Chapter A. I. A.



THE sixth annual meeting of Ohio Architects as an association, and the first as a chapter of the American Institute of Architects, was called to order at the Hotel Buchtel, Akron, Ohio, September 17, 1891, at 8 P. M., President F. O. Weary in the chair; G. W. Kramer, secretary.

On motion, the calling of the roll and the reading of the minutes of the last meeting was dispensed with, and the minutes as published in *THE INLAND ARCHITECT* were adopted.

The report of the treasurer, J. W. Yost, of Columbus, showing a balance in the treasury of \$76.47 was read and referred to an auditing committee, consisting of C. H. Owsley, F. O. Weary and G. W. Kramer.

On motion, all bills of expense were referred to the Executive Committee for approval.

The resignation of A. M. Smith was received, and the treasurer reporting him clear of the books, it was, on motion, accepted.

The bills of the secretary, principally for expense connected with the reorganization, amounting to \$18.75, were presented and referred to the Executive Committee.

Mr. Yost reported that Mr. William H. Reed, one of the Ohio Commissioners of the World's Columbian Exposition, was present, and desired that the Ohio Chapter take some action relative to providing plans, designs and supervision necessary for the erection of the Ohio building; that all necessary data would be determined and supplied, and necessary expenses met, and that it was their desire that the design and embellishment of said building should be of such representative and artistic character as would be designated by, and meet the approval of, the Ohio Chapter, and meet the following general requirements:

REQUIREMENTS.

Limit of cost.—The appropriation for the building is \$25,000.

Temporary.—The building is to be removed after the exhibition, and will, therefore, not necessarily be permanent in character.

Surroundings.—The building stands in a level park, surrounded at a greater or less distance by other buildings, and by trees, some six inches in diameter. The left façade faces Lake Michigan in the distance and beyond other buildings, and the right façade faces a small lake. The two rear sides will face the Michigan and Wisconsin buildings, not yet designed, and immediately in front, and only fifty feet from the lot, is to be the Art building, a design for which can be seen in *Harper's Weekly*, of the date of September 5, 1891.

Room.—There must be accommodations for the State Commission, including night quarters, rooms for ticket agent, baggage clerk, hotels and lodgings, conveyances, package room, telephone and telegraph, lost articles, information bureau, officer of the day, etc., with reception rooms, parlors, lavatories, kitchen, dining-room, sick rooms, physicians' rooms, exhibitors' room, small hall for meetings, and a room for a topographical representation of the state, with such other rooms, verandas, etc., as may be required to make it completely answer the purpose of a home for the Ohio people during the exhibition.

After discussion it was decided by motion that a committee of three be appointed to represent the Ohio Chapter and take charge of all matters pertaining to designing and supervising the construction of the Ohio building; that said committee ascertain the requirements, etc., formulate a suggestive plan and request designs from among the members of the chapter; that they be authorized to call to their assistance the services of any practicing member of the Chapter in making their selection and have full powers to act in the premises in conjunction with the commission.

On motion, Messrs. J. W. Yost, G. W. Rapp and F. S. Coburn were appointed a committee for that purpose.

*Translated and arranged by W. A. Otis, architect.

Mr. Yost called the attention of the Chapter to the death of Mr. G. H. Maetzel, an associate member of the Chapter from Columbus, and on motion a committee of three was appointed to prepare appropriate resolutions expressing the sympathy of this Chapter with the bereaved family, who reported the following:

Whereas, the great Architect of the Universe has in His infinite wisdom removed from our midst our worthy associate, G. H. Maetzel, and
Whereas, the relation held during a long business life by him with the members of this Chapter makes it fitting that we record our appreciation of him, therefore

Resolved, That the sudden removal of such a man from our body leaves a vacancy and a shadow that will be deeply realized by all members and friends, and will prove a grievous loss to ourselves and the public.

Resolved, That with deep sympathy with the afflicted relatives and friends of the deceased, we express an earnest hope that even so great a bereavement may be overruled for their highest good.

Resolved, That these resolutions be spread upon the minutes, and that a copy be furnished to this bereaved family.

(Signed)

GEORGE W. KRAMER,
 C. H. OWSLEY,
 H. A. LINTHWAITE, } Committee.

Several applications for membership being presented were referred to the Executive Committee for action in accordance with the by-laws.

On motion, the election of officers for the coming year was dispensed with, and that the present incumbents continue in office for the ensuing year, or until their successors be legally elected. This action was necessitated by the limited attendance and consequent inability to properly and satisfactorily hold an election, and it was so ordered.

The secretary reported that in accordance with the action of the last annual meeting the Executive Committee had taken all the necessary steps in revising the constitution and by-laws so as to be in harmony with the requirements of the American Institute of Architects; that the same had been submitted to the members and voted on by letter ballot and unanimously adopted; that a list of regular and associate members in good standing had been certified into the reorganized Chapter, and that the revised constitution and by-laws, together with a list of regular and associate members, were submitted to the Board of Directors of the American Institute of Architects, with application for charter as a Chapter of the American Institute of Architects. The constitution and by-laws meeting their approval, a charter was accordingly granted, which is now in possession of the secretary, and that the body is now legally and in fact a Chapter of the American Institute of Architects; that a seal had been adopted, settlement made with the treasurer, and the reorganization virtually accomplished and completed.

The following is a list of regular and associate members who have been certified into the Ohio Chapter and constitutes the list of charter members:

Regular Members, F. A. I. A.—Cincinnati—Wm. M. Aiken, John H. Boll, Wm. R. Brown, Chas. Crapsey, S. E. Des Jardins, Gustave W. Drach, A. O. Elzner, S. Hannaford, J. W. McLaughlin, Geo. W. Rapp, E. G. Rueckert, H. E. Siter
 Cleveland—F. S. Barnum, F. A. Coburn, J. N. Richardson, C. F. Schweinfurth.

Columbus—J. M. Freese, H. A. Linthwaite, J. W. Yost.

Dayton—S. R. Burns, Luther Peters, C. I. Williams.

Toledo—E. O. Fallis, D. L. Stine.

Akron—George W. Kramer, F. O. Weary.

Canton—Guy Tilden.

Zanesville—H. C. Lindsay.

Youngstown—C. H. Owsley.

Associate Members.—Columbus—E. W. Hart, J. A. Kremer, G. H. Maetzel, C. A. Stribling.

Cleveland—F. E. Cudell, Edward Schwabe, A. M. Smith.

Youngstown—L. Boucherle, W. B. Ellis, Herman Kling.

Dayton—R. E. Dexter, Frank L. Sutter.

Toledo—N. B. Bacon, Bernard Becker.

Cincinnati—Jacob J. Rueckert.

Hamilton—M. Reutti.

Springfield—Charles A. Cregar.

Tiffin—F. K. Hewitt.

Honorary Members.—R. C. McLean, Chicago; James H. Windrim, Philadelphia.

All members have been duly notified and provided with copies of the revised constitution and by-laws as adopted.

In making out the list, only members in good standing who were clear of the books could be transferred, the above list being certified to by the treasurer. Since effecting the reorganization the name of Frank J. Otter, of Dayton, has been added by reinstatement, and the name of A. M. Smith dropped by resignation.

On motion it was decided that when the convention adjourned it should be to hold a chapter meeting in Boston, October 29, 1891.

On motion it was decided that the consideration of the place of holding the next annual meeting be deferred until the meeting in Boston.

On motion it was decided to adjourn to meet in Boston, October 29, 1891.

THE valuable Pleasant Valley red sandstone quarry, near Fort Collins, owned by Nix & Moore, has been sold to Batchen Brothers & Johnson, of Chicago. The quarry is fully equipped, and the stone, being of a superior quality, is well known all over the United States. The purchasers have several large contracts on hand to fill at once. The price paid was \$75,000, and is considered a very low figure, as the quarry has always been estimated at over \$100,000. The purchasers are well known stone men in Chicago, the senior member, Mr. J. S. B. Batchen, being a director in the Central Trust and Savings Bank and a director of the Quarry Owners' Association of Chicago.

New Publications.

THE LUMBERMAN'S DIRECTORY OF THE UNITED STATES AND CANADA. Rand, McNally & Co., publishers, Chicago.

This firm have just issued an elaborate lumberman's directory and reference book of the United States and Canada, giving the county, railway, express or nearest shipping point, name and rating, business, power, style and daily capacity of every individual, firm or corporation dealing in any and every department of the lumber trade. It also embraces, among other useful information: Rules for inspection, classification and measurement of lumber in the various markets, the laws for material men and a digest of the statutes affecting lumbermen and lumbering. It is one of the most complete and exhaustive directories ever issued from the press.

SIXTY YEARS A BRICKMAKER: a Practical Treatise on Brickmaking and Burning, and the Management and Use of different kinds of Clays and Kilns for Burning Brick; with supplement for new beginners in brickmaking and hints to bricklayers and builders, by J. W. Crary, Sr. T. A. Randall & Co., Indianapolis. Price \$2.50.

The author states that the present book is not compiled from text books or encyclopedias, but is the result of his own experience in many places during many years, bringing him in contact with different varieties of clays, fuels and methods. The eleven chapters, with supplement and appendix, map out the ground pretty thoroughly and deal with all the problems likely to be met in making common or merchantable brick. There are discussions and comparisons of various forms of kilns and machinery, a specification for building kilns, and much heterogeneous information conveyed in a rambling discursive style. In spite of the irrelevant matter and the somewhat extravagant obiter dicta on various subjects the book will have a value for brickmakers potential and actual, and the numerous sub-headings will readily guide to the sought-for topic.

Association Notes.

ST. LOUIS CHAPTER A. I. A.

At the second annual meeting of the St. Louis Chapter American Institute of Architects, held September 29, 1891, the following officers were elected for the ensuing year: president, Thomas C. Young; vice-president, James H. McNamara; treasurer, Charles K. Ramsey; secretary, A. F. Rosenheim.

THE LONDON ARCHITECTURAL ASSOCIATION.

On Friday, October 2, the Architectural Association of London inaugurated its session's work with a *conversazione* at the Westminster Town Hall.

A large gathering of the students and their friends assembled, and the best wishes were expressed for the success of the new and complete curriculum which the association is now starting.

Up to the present no regular course of study has been prescribed for the young architect, and the need of such a plan has been so acutely felt and rendered so obvious by the series of examinations insisted on by the Royal Institute of British Architects, that the association set vigorously to work to supply the deficiency. The elaboration of the new curriculum has, however, occupied nearly two years.

To insure the success of the new scheme, more extensive and commodious premises have been secured at 56 Great Marlborough street, W., and carefully fitted up for the various lecturers and demonstrators. A large studio has also been provided, in which the practical work of the students will be subject to the guidance and correction of official instructors, and in which the students will have the incalculable advantage of the criticism and advice of men whose reputations stand highest in the profession. Among these may be mentioned Messrs. Alfred Waterhouse, R. A., the immediate past-president of the Royal Institute; G. Aitchison, B. A., A. R. A., a vice-president of the Royal Institute; Basil Champneys, M. A.; T. G. Jackson, M. A., and J. Belcher, Ernest George, E. J. May, Aston Webb, and E. W. Mountford, all Fellows of the Royal Institute.

The Royal Institute itself as a corporate body has, by special resolution, signified its approval of the new scheme in the most practical way, namely, by instructing its council to give such help as it may consider will best aid the development of this educational programme.

Now that the well-being of the public more than ever depends on the efficiency of the architectural profession, it must be gratifying to know that so earnest an endeavor is being made by young architects to fit themselves for grappling successfully with the varied problems—artistic and constructional—which are daily submitted to the modern practitioner.

The revised scheme, in addition to including those subjects examined upon by the Royal Institute, goes much further and embraces instruction in physics, chemistry, geology, natural philosophy, land surveying, color decoration, water-color painting and modeling. It is also hoped to shortly start a life class. A series of lectures by eminent men on painting, sculpture, and other allied arts, has also been arranged.

The facilities for improvement now placed within the reach of earnest students gives them opportunities totally unknown under the old system, which has been in operation nearly half a century.

BANQUET OF THE CHICAGO ALUMNI OF THE RENSSELAER POLYTECHNIC INSTITUTE, OF TROY, NEW YORK.

The reunion of the Chicago R. P. I. (Rensselaer Polytechnic Institute) Association of civil engineers at the Grand Pacific Hotel on the evening of October 5, 1891, was a very successful affair, the attendance being larger and more enthusiastic than at any previous meeting. The Rensselaer Polytechnic Institute at Troy, New York,

is the oldest school of civil engineering in the country. Its graduates, known colloquially as "R. P. I. men," occupy positions of the highest responsibility in connection with railways, canals, waterworks and other public enterprises all over the world. The Chicago R. P. I. Association, formed in November, 1889, numbers seventy members, mostly residents of Chicago. Among the older graduates present on this occasion were R. I. Sloan, chief engineer of the south side elevated road, H. F. Greene, assistant engineer to the Board of Public Works, C. W. Winslow, auditor of the Chicago, Burlington & Quincy Railroad, J. D. Reynolds, and Thomas Appleton, civil engineers, Mr. W. J. Fabian, cashier of the Chicago, Burlington & Quincy Railroad, Mr. Robert W. Hunt, inspecting engineer, and Mr. Lyman E. Cooley, engineer of the drainage commission. Charles E. Illsley, architect and civil engineer, of St. Louis, Missouri, was present by invitation and responded briefly to the customary toast in compliment to St. Louis. Mr. Tracy B. Drake of the class of '86 made interesting remarks on the benefits of a technical training both to the individual receiving it and to the community at large, and Mr. Cooley read a pungent and valuable paper in response to the toast "The political engineer," in which he maintained the position that while politicians should not try to be engineers, it was the duty of all patriotic engineers to be politicians.

Our Illustrations.

Birdseye view of the main buildings of the World's Columbian Exposition, Chicago; view looking from the west.

Perspective view of Fisheries Building for the World's Columbian Exposition, Chicago; Henry Ives Cobb, architect.

Design for building for the American Fine Arts Society, New York; J. A. Schweinfurth, architect, Boston, Massachusetts.

Official plat of grounds of the World's Columbian Exposition, Chicago, as approved by the Board of Control, September, 1891.

Perspective view of Galleries of Fine Arts for the World's Columbian Exposition, Chicago; C. B. Atwood, chief of design, architect.

Residence for Mr. J. K. Armsby, Jr., Evanston, Illinois; Irving K. Pond and Allen B. Pond, architects; perspective and plan of main floor.

Perspective view of Forestry and Dairy Buildings for the World's Columbian Exposition, Chicago; C. B. Atwood, chief of design, architect.

Wesley Hospital, Chicago, Treat & Foltz, architects. The lot upon which this new hospital will stand has a frontage facing east of 225 feet on Dearborn street and 106 feet on Twenty-fifth street. An alley, eighteen feet wide, in rear. On the north the lot adjoins the property belonging to the medical department of Northwestern university, the building for which will be twenty-five feet north of the hospital lot. This hospital will be a striking example of how the exigencies of a restricted city lot must be turned to good account in so planning and constructing a building of many stories as to adapt it to the more recent views concerning sanitary requirements. The series consists of four buildings—the administration building, the kitchen building and the center and south pavilions, all so located that they generously receive light and air. For this reason the architects have adopted the octagonal plan for the main wards, thus giving increased exposure to the sun. There are two recreation courts, between the buildings, with lawns, shrubbery and flowers, open toward Dearborn street.

The main corridor, nine feet wide, is placed adjoining the alley. Two of the pavilions will be five stories high, while the administration and kitchen buildings will be six, the upper two stories being in the high roof. Under all the buildings will be a basement with concrete floor, which will contain nothing but the cold-air ducts, sewer, water, steam and gas pipes and elevator machinery and boiler house. This basement will be lighted by large windows placed all around in well-drained areas. The main entrance is in the center of the administration building, while the twenty-five foot space on the north will be used for an ambulance entrance. The patients' entrance will be located in the court south of the administration building. The ground floor, eleven feet high, will contain in the administration building the office, a reception room, an accident receiving room, with accident ward. In the kitchen building on the first floor are the general kitchen, laundry, ice and meat room and pantries.

The first floor of the center pavilion will contain the charity eye and ear ward, consisting of five rooms for eight beds, a day or dining-room, ward kitchen and patients' lavatory and bath-rooms. The first floor of the center pavilion will be divided into store-rooms, mattress-room, truck and helps' rooms. The second story is to contain in the administration building a handsome pay ward for women, of seven rooms. This ward is to be closed off from the main corridor by glazed doors. The kitchen building will contain on this floor an officers' and nurses' dining-room, helps' dining-room, pantry and ironing-room. The second story of the center pavilion will contain a large octagonal sick ward for sixteen beds for female medical patients, a smaller ward of six beds and a separation room of two beds. The second story of the south pavilion will contain the women's surgical ward for twenty-five beds, divided in the same manner as the medical ward in the center pavilion, with the exception that a wound dressing-room will be placed adjoining the octagonal ward.

The kitchen building in the third story will contain a chapel to seat about ninety people, and two officers' rooms with lavatory and bath-room. The ward corridor, running north and south, will eventually be connected with the medical college clinical building by a bridge spanning the twenty-five-foot space between the two buildings. The hospital will have also its own operating-room for non-clinical operations. The third story of the administration building

will contain a pay ward for men, arranged in the same manner as the ward immediately below. The third story of the center and south pavilions will be exact duplicates of the wards in the second story. These will be for men's medical and surgical cases. The fourth story will contain in the administration building a pay ward for men, divided in the same manner as the story below. The kitchen building will contain a pay ward for men, consisting of five rooms with lavatory, bath-room and ward kitchen. This ward is separated from the main corridor. In the center pavilion in the fourth story is placed a handsome pay ward for men, consisting of thirteen rooms, sitting-room, ward kitchen, lavatory and bath-room. The south pavilion will contain on the fourth floor the children's ward, consisting of one large ward for girls and small boys with nine beds, two special wards for girls of two and one beds respectively; a ward with five beds and separate lavatory and bath, and separation or special ward for large boys. Lavatory and bath for small children, ward kitchen and a large play and dining-room for convalescent small children, connected with a balcony. The fifth story of the administration and kitchen buildings will contain gynecological and obstetric pay wards divided as in the story below. The part of the connecting corridor between the kitchen building and center pavilion will not be carried up this story. The fifth story of the center pavilion will be devoted to nurses' quarters divided into twelve sleeping-rooms, one sitting-room, bath-room, linen-closet, etc. In the south pavilion will be a gynecological pay ward of eleven rooms with bath-room and lavatory, and a large operating-room. The fifth floor of the center and south pavilion will be in the roof, and the connecting corridor between these two buildings will be carried up to this floor. There will be a sixth story in the administration and kitchen building containing in the former a well-lighted operating-room with etherizing and recovering rooms attached and two sleeping-rooms for officials. The sixth story of the kitchen building will be devoted to an isolating ward for contagious diseases that may develop in the hospital. This ward will be reached only by walking on the roof of the corridor. The stairways are of iron and slate and will surround the elevators, two of which are to be used. The stairways and elevators are divided off from the main corridors by glazed doors. There are balconies for each pavilion, placed where indicated on the plan. These are for the use of the patients. Two of these tiers of balconies are to be connected with the ground by iron stairs to be used as fire-escapes.

The heating will be by indirect radiation, with auxiliary direct coils in the wards for extreme cold weather. The fresh warm air will be introduced, after it has passed through a general tempering coil in the basement and through the indirect coils on the ceiling of the first story, into the wards through openings near the ceilings of the wards. By the arrangement of a damper in the flue the air may be mixed to the desired temperature, but these dampers are so arranged that the air supply cannot be shut off or even diminished. It will enter the wards either hot, cold or tempered. The foul air will be drawn from the wards through grated openings in the floor and under each bed. These are gathered together in galvanized iron ducts placed between the floor and ceiling of the story below, and carried into the large aspirating shafts in the center of the wards, upward and out at the top. The aspirating shafts are heated with steam coils placed in the bottom, thus insuring a powerful upward current of not less than 600 feet per minute. Each of the sick beds in the medical wards will have 3,600 cubic feet of fresh air per hour, and in the surgical wards 4,000 cubic feet per hour per bed.

The idea of having bath-rooms and lavatories with windows in them, and insisting that they should be kept tightly closed all the year around, will undoubtedly somewhat puzzle some readers; but the architects are sure that a little thought will show that any contamination in these rooms will, when the windows are open, readily be blown from them into the corridors, a fact which the most powerful artificial ventilation cannot obviate. The architects intend to change the air in the lavatories every ten minutes, and supply them with fresh air from the corridors, thus keeping up a steady flow of air in the opposite direction of and away from the patients.

It will be noticed that the sexes are distinctly separated by placing them in different stories. The whole of the second story is entirely devoted to women, the third to men, the fourth to men and children, while the fifth story is for women and nurses.

Each story of a pavilion is separated from the main connecting corridor by double swinging spring doors, and forms a distinct hospital for itself where patients are expected to stay after being properly installed. This arrangement does away with the objectionable feature of patients in general corridors so often found in hospitals.

The total capacity of the hospital, when completed, will be 200 beds, 125 of which are for charity and 75 for pay patients. In addition, the plans provide for the accommodation of twenty-five nurses and all the officers and helps' rooms required for a general hospital of 200 beds.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Residence of L. C. Lawton, Cleveland, Ohio; Coburn & Barnum, architects.

Mantel in parlor, Y. M. C. A. Building, Cleveland, Ohio; C. F. Schweinfurth, architect.

Residence of Hugh T. Birch, 1912 Michigan boulevard, Chicago; Henry Ives Cobb, architect.

Mantel in reception hall, Y. M. C. A. Building, Cleveland, Ohio; C. F. Schweinfurth, architect.

Residence of James Bolton, corner Forty-ninth street and Drexel boulevard, Chicago; Treat & Foltz, architects.

Ewing St. Mission Chapel (Congregational), Chicago; Irving K. Pond and Allen B. Pond, architects. Two full page plates are given; one of exterior view, and one of interior.

Synopsis of Building News.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Chicago, Ill.—A somewhat dull summer has ended in a busy fall, some of the larger offices having to resort to night work to get the drawings in readiness for contracts before the winter sets in. The probability is that the year's business will prove even larger than last, which was by several million dollars the largest known in the city's history.

Architect Clinton J. Warren: For John Cooper, at 2733 Michigan avenue, a three-story residence; to have stone front, steam or hot-water heating, hardwood finish, and cost \$30,000; making plans. Also making plans for an eight-story apartment house, to be erected on the southeast corner of North avenue and Clark street; to be 125 feet frontage on North avenue, and 225 feet on Clark street; to be of rock-faced stone basement, and above of pressed brick and stone; interior will be finished in hardwood and have steam heat, electric light, three elevators, gas ranges and fireplaces, marble wainscoting and bath rooms, mosaic floors, of fireproof construction, and cost \$400,000. For James F. Keeney, et al., a sixteen-story office building, 48 by 100 feet; to cost \$350,000; to be erected on the southeast corner of Fifth avenue and Madison street; buff pressed brick, terra cotta and granite, marble and tile work, electric light, elevators, steam heat. For James G. Cozzens, et al., on the northeast corner of Forty-seventh street and Lake avenue, a seven-story hotel; to cost \$200,000.

Architects Treat & Foltz: For Dr. J. W. Chew, on Erie street, between State and Dearborn, a four-story and basement apartment house, 40 by 88 feet; to cost \$23,000; Bedford stone front, hot-water heating, etc.; making plans. Also working on drawings for an eight-story warehouse, 50 by 200 feet; to cost \$125,000; to be erected at Pacific avenue near Twelfth street, for the Lake Shore & Michigan Southern Railway Company; to be of common brick, and have elevators, steam heat, electric light, etc. Also getting out plans for a town hall, 50 by 120 feet, two stories; to be erected at Harlem, Illinois; pressed brick and stone, electric light, steam heat. For Mrs. Payne, on Walton place, near State street, a four-story apartment house; to cost \$15,000; just commenced work. For J. B. Wolensak, on the southeast corner of Canal and Washington streets, an eight-story warehouse, 75 by 100 feet; to cost \$100,000; to be of pressed brick and stone, mill construction; have elevators, steam heat, electric light, etc.

Architect S. S. Beman: For the Pullman Palace Car Company, a two-story laundry, 70 by 154 feet; to be of common brick, with gravel roof, have steam heat, electric light, and cost \$50,000; making plans. Also, to be built at Pullman, a one-story repair shop, 400 feet long by 200 feet wide; common brick, iron roof, electric light.

Architect J. H. Huber: For William A. McGuire, a six-story and basement office building, 40 by 90 feet; to cost \$40,000; to be erected at 199 and 201 Washington street; the front to be all of iron and plate glass, and the interior to have marble wainscoting, tile floors, cement floors, electric light, steam heat, elevators, etc. For M. Portman, on Wilton avenue near Nellie avenue, a two-story and basement residence, 35 by 50 feet; to be of frame, with stone basement, have hot-water heating, stained, plate and beveled glass. For Mrs. Minnie Gegenheimer, a two-story residence, of frame and stone, to have hot-water heating, etc. For M. Laux, at 41 Delaware place, a three-story flat building, to be of pressed brick and stone. For Thomas Parker, Jr., a three-story residence at 557 Dearborn avenue; the front will be of granite and composition brick, have hardwood interior, hot-water heating, etc., and cost \$18,000.

Architects Huehl & Schmid: For A. C. Lautenschlager, et al., at Fort Madison, Iowa, a three-story packing house 99 by 166 feet, to cost \$80,000; to be of common brick, have gravel roof, electric light, etc.; making plans. For Mrs. E. K. P. Roberts, on Cottage Grove avenue near Thirty-first street, a four-story and basement store and flat building, 128 feet front by 66 deep, to be of pressed brick, stone and terra cotta, and cost \$50,000; making plans. For the same owner, on Rhodes avenue, a four-story flat building, 125 feet front by 50 deep; to be of pressed brick, stone and terra cotta and cost \$30,000. For W. J. Jones, on Clark street near Diversey avenue, a four-story and basement store and flat building, 40 by 60; to be of pressed brick and stone with copper bays, gravel roof, and cost \$15,000. For S. Meyer, on Evanston avenue near Halsted street, a two-story frame residence, 35 by 60 feet in size; to have stone basement, steam heat, electric light, hardwood interior and cost \$12,000. For Mrs. William Waller, a four-story store and flat building; to have pressed brick and brownstone front, copper bays, etc.; to cost \$25,000.

Architect Thomas Wing: For George Duncker, at 1541 Diversey avenue, a two-story Bedford stone front residence; to have a tile roof, hot-water heating, hardwood finish, etc.; cost \$10,000.

Architect R. G. Pentecost: For W. T. Tamblin, at 4136 Michigan avenue; a three-story residence of Bedford stone front, pressed brick side, slate roof, furnace, etc.; to cost \$20,000.

Architects Thomas & Rapp: For O. W. Mysenberg, on Astor street near Burton, a three-story residence 26 by 80 feet in size; to be of buff pressed brick, with Bedford stone trimmings, and cost \$50,000. For Mrs. Long and Mrs. Clark, on Calumet avenue near Thirty-fifth street, two three-story residences; to have Bedford stone fronts and cost \$20,000. For H. F. Wachsmuth, on Stanton avenue near Thirty-ninth street, a four-story apartment house of Bedford stone front; to cost \$30,000.

Architects Blitz & Marshall: Making plans for two-story school 60 by 85 feet, to be erected in Third district, Manitowoc County; to be of Milwaukee pressed brick and stone, slate roof, furnaces, etc.; cost \$10,000.

Architect A. G. Ferree: For George R. Allen, on Diversey avenue, near Lincoln avenue; twelve two-story frame houses and several two-story bricks, besides a four-story flat building—the whole to cost about \$40,000.

Architect George Grussing: For Mr. John Donahue, at 1901 Madison street; a three-story store and flat building, 24 by 70; to cost \$10,000. Pressed brick and brown stone, slate and galvanized iron bays.

Architect T. H. Bell: For L. J. McCormick, corner of Wabash avenue and Congress street; a two-story store and office building, 80 by 166 feet, to cost \$30,000. Iron and glass, common brick, gravel roof, galvanized iron, steam heat, electric light. For W. H. Hopkins, at Aurora; a four-story store and office building, 44 by 115 feet in size. Stone front, gravel roof, electric elevator, electric light, etc.

Architects Dahlgren & Lievendahl: For Dr. Abbott, at Ravenswood, a two-story frame residence, stone basement, furnace, etc. For George E. Keasel, on Frederick street, near Clark, a four-story flat building; to cost \$15,000; Bedford stone front, copper bays and cornices, steam heat, etc. For John Hoff & Co., on Leland avenue, near Wolcott street, Ravenswood, five frame houses; to cost \$12,000.

Architect Henry Ives Cobb: Making plans for office and theatre building, to be erected on the site of the First Regiment Armory, on Jackson street. For George H. High and J. V. Farlin, two three-story residences of Bedford stone front; to cost \$60,000; to be erected on the Lakeshore Drive, between Scott and Goethe streets. For the Hartford Safety and Deposit Company, on the southwest corner of Madison and Dearborn streets, a sixteen-story office building.

Architects Parke & Pursell: For G. W. Pierce, on Grand boulevard north of Forty-ninth street, a two-story residence, 25 by 70 feet; to cost \$20,000; Bedford stone front, oak interior finish, hot-water heating, marble and tile work, etc.

Architect Francis J. Norton: For James Gibson, at Englewood, a two-story residence, of stone, brick and frame. For F. Pavliced, at Ravenswood, a two-story residence, frame, stone basement, furnace, etc. For A. C. Draper, at southwest corner of Sixty-seventh and Wright streets, a two-story semi-detached residence, to have a Bedford stone front, steam heat, etc.

Architect Frank Randak: For M. Rosenberg, on Newberry avenue near Fourteenth street, a four-story flat building, of pressed brick and stone; to cost \$15,000.

Architect H. K. Weeks: For James H. Weeks, at 2975 South Park avenue, a three-story flat building, to have a stone front, and cost about \$10,000.

Architect August Maritzen: For Winter Bros., at Pittsburgh, Pennsylvania; a brew-house, refrigerator, etc. For the Mexican National Brewing and Distilling Company, at the City of Mexico; a complete brewing plant and distillery; cost \$500,000; making plans. For Charles Gower & Sons, Victoria, British Columbia,

a complete plant. For St. Joseph (Mo.) Brewing Company, a new brew-house and malthouse; cost \$150,000; making plans. For P. Schoenhofen Brewing Company, at Chicago; a drying house; making plans. For Albert Ulrich, a handsome residence.

Architect George H. Borst: For White & Coleman, on the southeast corner of Jackson Park Terrace and Hope avenue, a five-story hotel; 520 feet front by 125 deep. It will contain 1,700 rooms, and will be lighted by electricity. It is not decided what material will be used. Plans are now being prepared and work will not be commenced till next spring.

Architect George O. Garnsey: For John Norris & Co., at Pueblo, Colorado, a four-story store, office and hall building, to have stone and pressed brick front, steam heat, etc.; and cost \$40,000. For C. Southern, at Ottumwa, Iowa, four two-story frame houses, to have stone basements, sanitary plumbing, furnaces, etc. For R. S. Jones, at Mount Jackson, a two-story frame residence.

Architect L. G. Quackenboss: For George H. Frost, three two-story residences, to have pressed brick and stone fronts, hardwood finish, furnaces, etc., to be erected at 54 Oak avenue. For L. J. Walsh, at 1485 Madison street, a three-story store and flat building, to have a stone front, and cost \$15,000.

Architect Perley Hale: For Payne & Green, of Englewood, a two-story flat building, size 48 by 60 feet, to be erected at Auburn Park. It will have a cut stone front, galvanized iron bays and cornices, etc. For Neil & Mahne, on Green street between Fifty-sixth and Fifty-seventh streets, Englewood, three two-story flat buildings, to have stone fronts, hardwood finish, plate and beveled glass, and cost \$15,000.

Architect D. A. Lapointe: For Louis Owsley, on Robey street, near Jackson, three two-story and cellar residences; to have stone fronts, furnaces, stained, plate and beveled glass; cost \$21,000. For M. L. Dunn, on Lake street, near Garfield Park, a three-story store and flat building; to have a Bedford stone front.

Architects Wilson & Marble: For Wilson & Parke, a four-story apartment house, 50 by 90 feet; cost \$40,000. The front will be of Roman buff pressed brick with Bedford stone trimmings, hardwood interior finish, marble and tile work, steam heat, electric light, elevators, laundry driers, gas ranges and fireplaces, etc. For H. M. Wilcox, on Lake avenue and Thirty-ninth street, a three-story Bedford stone front residence; cost \$10,000. For Albert Mendel, on Grand boulevard, near Thirty-ninth street, two three-story residences; to have Bedford stone fronts, hot-water heating; cost \$36,000. For Milton Johnson, at Decatur, Illinois, a two-story frame residence, stone basement, furnace, etc.; cost \$12,000. Also made drawings for three three-story residences; to have stone fronts, hardwood finish, furnaces, etc.; to be erected southeast corner of Lake and Oakwald avenues.

Architect John T. Long: For Dr. Turner, three two-story residences, on Vernon avenue, between Thirty-eighth and Thirty-ninth streets; Bedford stone fronts, copper bays, hardwood finish, furnaces, etc.; cost \$16,000. For Mrs. Julia Welch, on Garfield boulevard, near Sherman street, a two-story residence, of Portage stone front. For E. G. & F. W. Short, at Morgan Park, a three-story store and flat building, 50 by 70 feet, of Bedford stone front, with copper bays, hardwood finish, hot-water heating, etc.; cost \$15,000.

Architect Alfred Smith: For M. Piratzky, on Ashland avenue south of Harrison street, a four-story residence; size 34 by 70 feet; cost \$20,000. It will be in the renaissance style of architecture with a handsome Bedford stone front, with slate roof and mansard, hardwood interior, plate and beveled glass, hot-water heating.

Architect L. G. Hallberg: For John Mountain, on Huron street near the lake, two three-story and basement stone front residences; cost \$17,000; hardwood finish, beveled and plate glass, hot water or furnaces, etc. For Gilbert & Bennett, on Sixteenth street near Western avenue, a four-story factory; size 41 by 168 feet; to be constructed of common brick with gravel roof, and cost \$30,000. Also, for himself, on Huron street near the lake, a three-story and basement semi-detached residence; to have a rock-faced stone front, hardwood interior finish, gravel roof, hot water or furnaces, etc., and cost \$17,000.

Architect Julius Speyer: For A. Pfaff, at 1207 to 1209 Madison street, a three-story store and flat building and pavilion; cost \$25,000. Blue Bedford stone front, steam heat, electric light, etc.

Architect Fred W. Perkins: For B. Philpot & Co., a four-story store and flat building of pressed brick and stone front, hardwood finish, steam heat, etc.; cost \$20,000. To be erected at 1464 Michigan avenue; making plans. For the same owners, at 1250 to 1252 Michigan avenue, a four-story store and flat building; cost \$40,000; pressed brick and stone front, steam heat, electric light, stained and plate glass. For J. M. Bishop, of Joliet, a four-story and basement store and flat building, to be erected at 1256 Michigan avenue; pressed brick and stone front, gravel roof, steam heat, electric light, tile and marble work; cost \$25,000.

Architects Crowen & Richards: For C. Y. Boardman, on Sixty-sixth street and Maryland avenue, a two-story flat building, of pressed brick and stone front, electric and gas light, two furnaces, etc.

Architect W. M. Wolters: For A. G. Cummings, on Seventeenth street, between State and Dearborn, a five-story store and flat building, size 80 by 62 feet, of pressed brick and stone front; to cost \$30,000.

Architect J. L. Silsbee: For J. S. Norton, corner Lincoln and Lill avenues, a three-story flat building, of pressed brick and stone; to cost \$40,000.

Architects Furst & Rudolph: For D. M. McKindley, at 2317 to 2319 Wabash avenue, a four-story store and flat building, 50 by 137 feet; to cost \$50,000. For J. H. Young, on Ogden avenue, near Twelfth street, a three-story store and flat building, of Tiffany pressed brick and terra cotta front.

Architect H. P. Harned: For H. S. Robbins, on Fifty-sixth street and Lake avenue, a three-story store and flat building, 150 feet long by 75 wide; to cost \$50,000. Also a four-story factory, 60 by 100 feet, near Twenty-fifth street and Archer avenue.

Architects Stiles & Stone: For Dr. W. S. Johnson, corner of Fifty-fourth street and Washington avenue, two three-story cut stone front residences, hardwood finish, furnaces, etc.; to cost \$22,000.

Architect Fred. Ahlschlager: For John H. Merker, on School between Fifty-seventh and Fifty-eighth streets, a two-story residence, pressed brick and stone, furnace, etc. For Henry Seeberger, corner of Thirty-second and Dearborn streets, a three-story store and flats of stone front; to cost \$14,000.

Architect Wm. Griesser: For Frank Stang, Sandusky, O., a six-story brewery, 150 by 80 feet; to cost \$125,000. For Jacob Kuebler, at Sandusky, a pneumatic malting plant; 150,000 bushel storage elevator; four-story kiln, etc.; to cost \$50,000. For Falk, Jung & Borchert, at Milwaukee, Wis., a brew-house of 500,000 barrels capacity; to cost \$100,000. For Star Brewery, Chicago, a storage house, ice machine house, etc.; to cost \$100,000. For the Voigt Brewing Company, Detroit Mich., a three-story storage house; to cost \$25,000.

Architects Ostling Brothers: For M. Lundquist, on School street, near Evanston avenue, three-story flats, rock-faced stone front. For A. Bjorklund, at 152 Townsend street, four-story store and flats; to cost \$14,000. For Olof Nelson, at 291 N. Franklin, four-story flats; to cost \$15,000. For J. A. Modin, on Oak street, four-story store and flats; to cost \$16,000. For M. Schucker, 4623 Evans avenue, three-story flats; stone front; to cost \$10,000. For M. Levin, on Washtenaw avenue, two-story flats, stone front, two furnaces, etc.; to cost \$10,000. Architect Wm. Strippelman: For W. W. Kimball, Twenty-sixth and Rockwell streets, five-story factory, 40 by 210 feet; to cost \$27,000.

Architects W. W. Boyington & Co.: For V. H. Higgins and H. J. Furbcr, southeast corner State and Washington streets, sixteen-story stores and offices; 100 by 90 feet; to cost about a million dollars; making plans. For the Gray Electric Company, at Highland Park, three-story factory; to cost \$100,000.

Architect George Beaumont: For H. M. Clarke, on Fletcher street, between Evanston avenue and Halsted street, three-story flats, Bedford stone front; to cost \$15,000. For S. Weise, at 3360 South Park avenue, a three-story residence, Bedford stone front, steam heat; to cost \$18,000. For Jacob C. Cohn, at 435 Marshfield avenue, three-story flats, Bedford stone front; to cost \$16,000.

Architect H. D. Deam: For Mr. Haerther, on Madison avenue near 55th, two-story flats, 160 by 70 feet; Bedford stone front, furnaces (16), to cost \$40,000.

Architect Louis Martens: For Mrs. C. H. Martens, at 412 Ashland avenue, a three-story flat building, of Bedford stone front, copper bays, furnaces, etc. For Mrs. Mary A. Coulter, southeast corner Warren avenue and Francisco street, a three-story flat building of St. Louis brick and stone. For James O'Neill, on Taylor street, near Paulina, a three-story store and flats. For Benton Halley, at Windsor Park, six two-story frame houses, furnaces, plumbing, etc.; cost \$15,000. For Mrs. A. Reilly, on Monroe street, near Garfield park, a two-story flat building.

For E. M. Underwood, at Riverside, a frame residence, furnace, etc. For himself, northwest corner of Van Buren and Whipple streets, a four-story store and flats, 75 by 100 feet; to cost \$35,000; pressed brick, terra cotta and Rosita pink stone, copper bays and tower.

Architects Faber and Pagets: For English Lutheran Seminary, a three-story seminary, five residences, and other buildings, to be erected on their ten acre lot bounded by Sheffield avenue, Addison street, Nellie and Clark; to cost about \$300,000.

Architect F. B. Townsend: For J. L. McLuer, northwest corner Thirty-fifth and Dearborn streets, four-story store and flats, 122 by 50 feet; to cost \$45,000. Bedford stone front.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall: There is nothing new in the way of building news only to say that Cincinnati can feel proud of her record this year in the way of substantial buildings. Now that the ice is broken, let us continue to hope that next year will see many unsightly corners occupied by beautiful structures. Our Builders' Exchange at a recent meeting heartily indorsed a strong lien law, and their delegates to the National Association of Builders were instructed to do all they could to formulate a national law. Another thing advocated was to have the national secretary of the National Association of Builders to formulate some general form for exchange use, for the compilation of building statistics, a duty clearly devolving on exchanges, thereby raising the standard of efficiency.

Architect James W. McLaughlin reports plans for "Der Deutsche Altenheim," on the German Old Men's Home, Walnut Hills; materials: brick, slate roof, pine finish, steam heat, blinds, etc.; cost \$90,000. For William Gibson, a remodeling of his residence; materials: pressed brick, frescoing, gas, plumbing, tiling, laundry fixtures, mantels, etc.; cost \$9,000.

Architects Plympton & Nash report for Mrs. J. S. Cook a fine residence; materials: pressed brick, slate roof, furnace, hardwood, mantels, stained glass, etc.; cost \$13,500. For Mr. F. Spencer, Covington, Kentucky, a residence; materials: pressed brick, slate roof, furnace, pine finish, stained glass, mantels, blinds, etc.; cost \$5,000. For Miss E. G. Cook, Walnut Hills, a residence; materials: frame, shingle roof, pine finish, furnace, grates, mantels, stained glass, etc.; cost \$4,500. For Robert T. Miller, 632 Greenup street, Covington, Kentucky, a remodeling of his residence; cost \$5,000.

Architect W. W. Franklin reports: For Thomas W. Keeney, a block of residences; materials: frame, stone, slate roof, pine finish, grates, plate and stained glass, plumbing, etc.; cost \$40,000. Also for Hon. Josiah Kirby, a residence; materials: pressed brick, stone trimming, slate roof, blinds, furnace, gas and plumbing, plate and stained glass, mantels, etc.; cost \$12,000.

Architect J. G. Steinkamp has drawn plans for a flat building for Thomas Emery's Sons; this is a remodeling job, and will cost about \$10,000.

Architect George W. Vogel has prepared plans for a hotel at Fort Thomas, Kentucky, near Newport; materials: frame, slate roof, fireproofing, elevators, gas, plumbing, tiling, etc.; probable cost \$40,000; write to A. Harms, 62 W. Fourth street, Cincinnati, for full particulars.

Architect Henry E. Suter has drawn plans for an Episcopal Church, called the Chapel of the Nativity, on Price Hill, Cincinnati; materials: brick, stone, slate roof, gas, church furniture, stained glass, pews, etc.; cost \$11,000.

Architects Crapsey & Brown report: For the Danville, Kentucky, School Board, a schoolhouse; materials: brick, slate roof, furnace, blackboards, furniture, etc.; cost \$15,000. Also Chapel Building, Centre College, Danville, Kentucky; materials: brick, slate roof, furnace, stained glass, gas, plumbing, etc.; cost \$23,000. Also for Methodist Episcopal congregation at Clifton, Ohio, Cincinnati, a church edifice; materials: stone, slate roof, hardwood, pews, stained glass, gas, plumbing, etc.; cost \$19,000.

Architects S. Hannaford & Sons report extensive alterations to a building for the Bell Telephone Company; the building will be used for offices and exchange, and will require plumbing, marble tiling and wainscoting, gas fixtures, etc. Also alterations to the residence of Attorney General J. Hendrick, at Frankfort, Kentucky. Also residence for J. E. Hancock; materials: pressed brick, hardwood, slate roof, gas, plumbing, stained glass, mantels, etc.

Architect W. S. Robinson reports: A residence for Mr. F. B. Drexilins; materials: frame, shingle roof, pine finish, furnace, plumbing, gas, stained glass, etc.; cost \$4,000.

Architect John H. Boll reports: For Mrs. Rose Bussing, a residence; materials: pressed brick, slate roof, pine finish, furnace, gas, plumbing, etc.; cost \$4,000.

Architect Gustave W. Drach reports: For M. B. Verkamp, a residence; materials: frame, slate roof, blinds, plumbing, gas, stained glass, mantels, furnace; cost \$5,000. Also for Mr. L. H. Shafer, a residence; materials: frame, slate roof, furnace, gas, plumbing, mantels, stained glass, etc.; cost \$5,000.

Architect J. J. Rueckert reports: For Henry Gewert, 419 Vine street, a tenement house; materials: brick, stone trimmings, gas, plumbing, blinds, pine finish, etc.; cost \$8,000.

Cleveland, Ohio.—Architect John Eisenmann: For the Cleveland Dorcas Society, an old Folks' Home, three-story; size 40 by 50 feet, brick and stone, slate roof; cost \$8,000.

Architect S. R. Bagley: For the Buckeye Electric Company; a three-story factory, size 30 by 90 feet, brick and stone; cost \$9,000.

Columbus, Ohio.—Architect F. L. Packard: For the Board of Education, a two-story public school library, size 60 by 150 feet, stone with tile roof, hot-blast heating and ventilation; cost \$50,000. For the Ohio State University, a manual training school, two stories, size 185 by 160 feet, brick and stone with slate roof; cost \$52,000. For C. A. Bowes, a two-story residence, size 36 by 60 feet, brick and stone, slate roof, hot-water heating; cost \$15,000. For Edward W. Sursner, a four-story business block, brick, stone trimmings; size 44 by 100 feet; cost \$11,000. For the Eastwood Church, a small chapel, size 50 by 50 feet, cost \$10,000.

Denver, Colorado.—Architects Lang & Pugh have plans for two dwellings: For A. Hempstead, two stories, brick and stone; \$12,000.

Architect F. C. Eberly: For J. S. Appel & Co.; a three-story business block; brick, stone and iron; to cost \$20,000.

Detroit, Michigan.—Architects Spier & Rohns: For McKellar & McHugh, of Windsor, Ontario, a three-story block of brick stores: pressed brick with brown stone trimmings, to be built on southeast corner of Sandurett and Ferry avenues; cost \$11,000.

Architects Donaldson & Meier: For the Brush estate, a brick foundry; size 45 by 91 feet; cost \$8,000.

Architects Mortimer L. Smith & Son: For George B. Morhous, a two-story brick residence, slate roof, on the northeast corner of Cass avenue and Stimpson place; cost \$12,000.

Architect A. E. French: For R. S. Webb, a block of three two-story brick stores on south side of Grand River avenue, between Third and Fourth streets; cost \$5,000.

Architect George E. Depew: For William Ires, five frame dwellings on corner Trumbull and Putnam avenues; cost \$12,500.

Architects E. A. Walshe & Son: For Robert J. Wilson, a two-story residence, pressed brick; on south side, Hancock avenue, between Woodward and John R. streets; cost \$10,000.

Architect E. E. Meyers: For the Memorial Presbyterian Society, additions and alterations to church, on Campan and Clinton streets, size 42 by 11 feet; cost \$5,000.

Architects A. C. Varney & Co.: For G. L. Peck, Toledo, Ohio, a two-story frame residence; cost \$4,800.

Architect M. W. Schovel: For self, a two-story brick residence, on St. Aubin avenue and Mullett street; to cost \$5,000.

Kansas City, Mo.—Architects Hogg & Rose: For Dr. A. J. McDonald, a two-story cottage; cost \$5,000. Also have plans for a two-story brick office building; cost \$16,000.

Architects Vrydagh & Shepard have prepared plans for a Baptist church at Sedalia; brick and stone; cost \$19,000.

La Grange, Ill.—Architect Lewis P. Richardson, of Chicago: For Edward Stiles Ely, on Kensington addition, a thirteen-room residence; bath and basement; cost \$5,700; first floor finished in oak, birch and maple, balance in natural pine; furnace and electric light. Also residence for Miss Hattie Suydan; ten rooms, bath, basement and unfinished attic; cost \$4,400; oak and natural

pine finish; furnace and electric light. Also residence for G. B. Johnson; twelve rooms, bath and basement; cost \$4,800; quarter-sawn Georgia pine finish; furnace, electric light and gas. Also residence for O. J. Holbrook; eight rooms, bath and basement; cost \$4,000; finished in oak and quarter-sawn Georgia pine, natural finish; furnace and electric light.

Milwaukee, Wis.—Architects Crane & Barkhauser: For George J. Schuster, a three-story residence; size 60 by 90 feet; brick, with stone foundations and trimmings, and all modern improvements; cost \$30,000.

Architects Ferry & Clas have prepared plans for a two-story, double dwelling for J. J. Schissler; size 48 by 54 feet; brick and stone, shingle roof, furnace, etc.; cost \$6,000.

Architect H. Messmer: For Mr. Rebhahn, a two-story residence; size 32 by 55 feet; common brick and frame, stone foundation; cost \$7,000.

Architect G. Kirsch has prepared plans for a two-story school building, to be built at Monroe, Wisconsin; size 52 by 64 feet; brick and stone; cost \$10,000.

Minneapolis, Minn.—Jas. Carlisle & Sons have contracts with the Great Northern Railway Company for a twenty-stall roundhouse at Great Falls, Montana; also for a machine, engine and boiler shop, size 140 by 150 feet; storehouse and office, size 40 by 100 feet; all of brick and to be completed this year. Also for a brick laboratory and brass foundry in St. Paul, size 48 by 68 feet.

Norfolk, Neb.—Architect J. C. Stitt: For Cedar county, a two-story court house; size 57 by 81 feet; pressed brick and stone, slate roof, steam; cost \$25,000. For the Farmers State Bank, a two-story business block, brick and stone; size 100 by 67 feet; cost \$15,000. For the Alcova Improvement Company, Alcova, Wyoming, a two-story frame hotel; size 60 by 55 feet; cost \$6,000. For the Randolph School District, a two-story schoolhouse, brick and stone; size 54 by 56 feet; cost \$6,300.

Omaha, Neb.—Architect F. M. Ellis: For Dr. Keeley, at Blair; an Inebriate Institute; two stories, size 97 by 30 feet, frame and brick; to cost \$5,000.

Architect T. Hodgson, Jr.: For C. N. Deitz; a three-story residence, size 48 by 60 feet, brick, slate roof; cost \$15,000. Also for J. H. Windsor; a three-story dwelling, size 45 by 55 feet, brick, shingle roof; to cost \$8,500.

Pittsburgh, Pa.—Architect William H. Sims: For Dr. C. Evans, a two-story residence; brick and red sandstone, slate roof; size 40 by 51 feet, to be erected on South Negley near Fifth avenues; cost \$24,000. Also for O. K. Gardner two three-story dwellings; brick, stone trimmings, tin roof; size 48 by 65 feet; cost \$15,000; contracts not let.

Architects Butz & Kauffman are preparing plans for a twelve-story office building; brick, granite and iron; to cost about \$100,000.

Architect Jules De Horvath, Chicago: For Trustees of the Carnegie Library, a two-story library building; size 400 by 365 feet; frame and stone; to cost \$700,000.

Architects name not given for the following: The St. Stephen's Roman Catholic Church will build a two-story school building; size 42 by 67 feet; brick, tin roof; cost \$14,000. For the Rev. T. H. Chapman, a two-story brick residence; size 28 by 42 feet; slate roof; cost \$5,000. For A. P. Stephenson, a two-story brick dwelling; size 32 by 44 feet; slate roof; cost \$8,000. For Capt. J. J. Vandergrift, a two-story brick residence; size 25 by 56 feet; slate roof; cost \$6,400.

Rochester, N. Y.—Architects Nolan, Nolan & Stene have completed designs for a brick block for Mr. Albert Bier, to be four stories high and contain stores and apartments; galvanized iron bay, tin roof; to cost \$10,000. For the Genese Salt Company, a series of buildings to be built at Piffard, New York, to be used for salt manufacture; will be heavy framing of Georgia pine; to cost about \$23,000.

Architects Otto Block & W. H. Barnes have prepared plans for a three-story frame building for John Frey, to be built at Charlotte; will be 136 feet front by 65 feet and contain six stores and eight apartments; slate roof, galvanized cornice; to cost \$15,000. For Mr. J. J. Otto, a frame residence on Strathallan Park; to cost \$4,000. For Mr. W. H. Pidrick, a frame residence; to cost \$4,500. Plumbing alterations at the New York State Industrial School, fitting up hospital department with baths, etc., complete plumbing, also kitchen fittings; to cost \$1,500.

Architect W. Foster Kelly has made plans for a Polish Catholic church at Albion, New York; brick and local stone, slate roof, galvanized iron cornice and ornaments, furnace heat, gas lighting; to be 45 by 100 feet, and contain 400 sittings; cost \$15,000. Alterations in two churches at Geneva, changing one from Protestant to Catholic, putting in chancel, altars, seating, flooring, and changing gallery; the other to have new seating, stained glass. Chapel for Nazareth convent, corner Frank and Jay streets, to be of brick and stone, stained glass, seating, hardwood floor; to cost \$25,000. A frame residence for Mr. J. H. Lenahan; oak interior finish; to cost \$3,000. A new school for St. Vincent's Female Academy, at Kingston, Canada; brick, with stone trimmings, slate roof; to cost \$15,000.

Springfield, Ill.—Architect George H. Helmle: For Charles H. Lanphier, two-story store and office building, size 40 by 72 feet, pressed brick front, with stone trimmings; cost \$7,000. For H. B. Prentice, two-story frame dwelling, size 34 by 52 feet, seven rooms; wood mantels, hardwood finish, stained glass, furnace heat; cost \$4,200. For William Beckemyn, Sr., two-story frame dwelling, size 40 by 50 feet, ten rooms; stone foundation, slate roof, oak finish, stained and plate glass, furnace heat; cost \$5,500.

Springfield, Ohio.—Architects Richards & Gotwald: For Mast, Crowell & Kirkpatrick, a four-story business block, size 50 by 90 feet; brick, fireproof, steam heated; cost \$30,000. For S. J. King, a four-story block, size 103 by 110 feet, stone and brick, steam heat; cost \$38,000. For M. B. Gotwald, a two-story residence; brick, hot-water heating, etc., size 34 by 60 feet; cost \$8,000. For William Seybold, a three-story brick dwelling, size 18 by 99 feet; cost \$4,500.

St. Louis, Mo.—Architects Foster & Illner: For F. Feldbush, a two-story residence; size 27 by 50 feet, brick; to cost \$6,000.

Architect C. J. Wilhelm: For the German Dramatic Association, a two-story theatre; size 78 by 152 feet, stone and brick, to be built on Fourteenth street and Lucas place.

Architect L. Cass Miller: For B. English, a three-story residence; size 60 by 30 feet, brick, stone foundation; to cost \$10,000.

The J. B. Legg Architectural Company, for J. B. Legg, a two-story residence; size 28 by 52 feet, brick and stone, slate roof; to cost \$9,500.

Architect J. B. Cairns: For the Baptist Board of Trustees, a two-story church; size 80 by 125 feet, brick, with stone foundations, slate roof and all improvements; cost \$35,000.

Architects Eames & Young have prepared plans for a two-story residence for T. A. Merpenburg; size 22 by 40 feet, frame; cost \$25,000.

Architect Blair Redington: For J. R. Webber, a two-story residence; size 28 by 43 feet, brick, slate roof; cost \$5,000.

St. Paul, Minn.—Architect C. A. Wallingford: For the St. Paul Loan, Investment and Improvement Company, block of three store buildings, on Grand avenue, near Snelling. Buildings will be of pressed brick, metal cornice, plate-glass fronts, with housekeeping flats above, having bathrooms and all modern conveniences. Also for the same parties, two residences on Grand, west of the stores; to be of ten rooms each, with hardwood finish and all modern conveniences. Under contract. For A. Eddy, three brick and stone buildings, corner Portland and St. Alban's streets, with tiled porches, natural wood finish throughout; cost \$24,000.

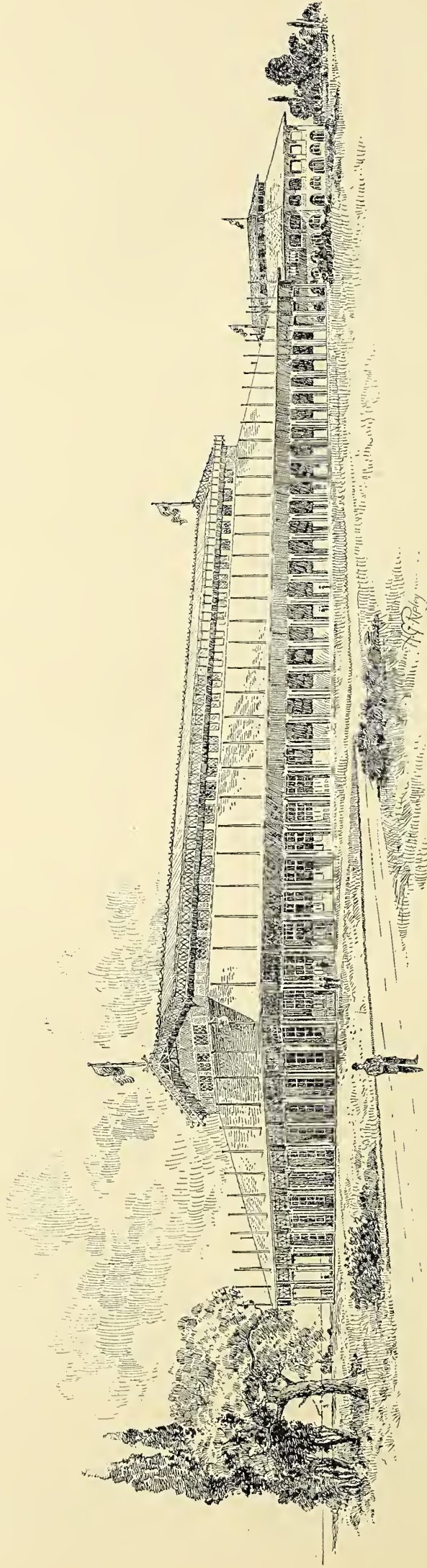
Architect Cass Gilbert is preparing plans for a row of fine houses on Summit avenue, near Western. The property is owned by Lane K. Stone and A. H. Paget. The improvements will cost about \$60,000.

J. P. Hoffman has commenced the erection of a \$6,000 residence on Ashland avenue, near Kent street. W. Mermuth is building a \$5,000 residence on St. Anthony avenue, near Western.

G. M. Deeks has a contract to be completed before January 1, 1892, for a passenger station at Bozeman, Montana, for the Northern Pacific Railroad Company. To be built of Menominee brick, with brownstone trimmings.

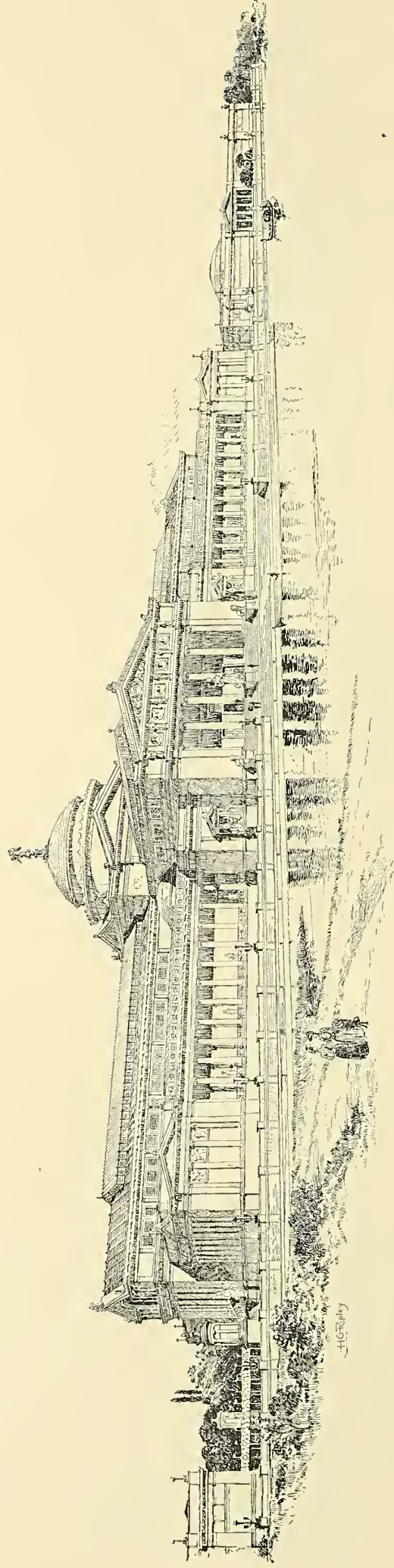
Fred Althen has the contract for a brick freight house, size 43 by 47 feet; to be built in Minneapolis before November 15, for the Great Northern Railway Company.

Tacoma, Wash.—Architects Bullard & Haywood: For the First Methodist Episcopal Church, a one-story brick and stone church; size 104 by 145 feet; to cost \$80,000.



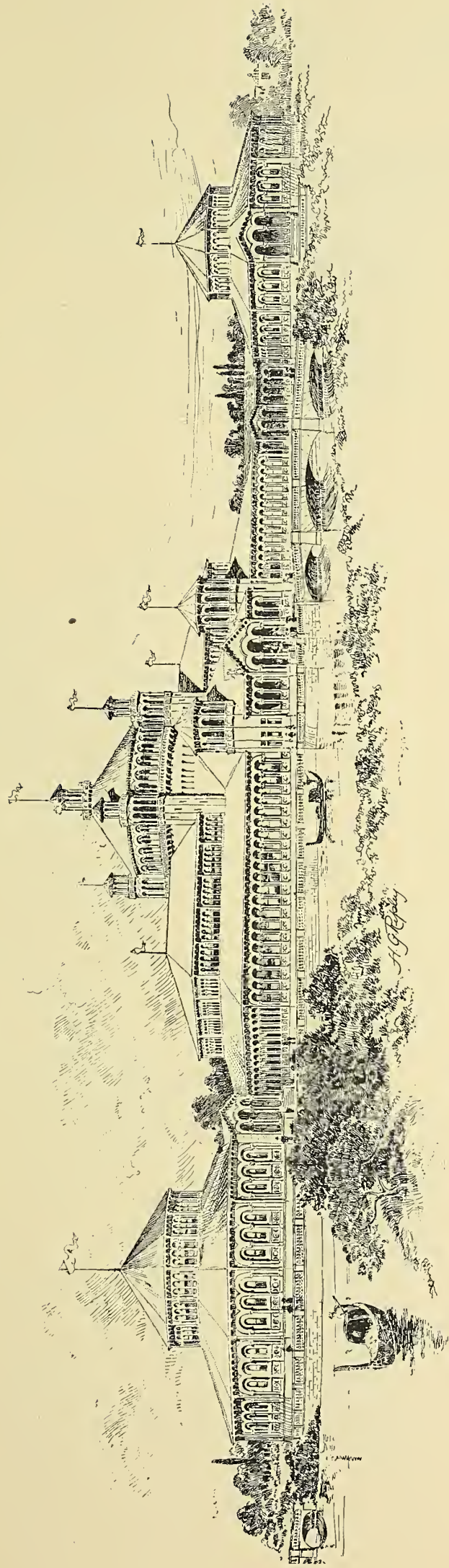
PERSPECTIVE VIEW FORESTRY AND DAIRY BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, OCTOBER, 1891.

C. B. ATWOOD, CHIEF OF DESIGN, ARCHITECT.



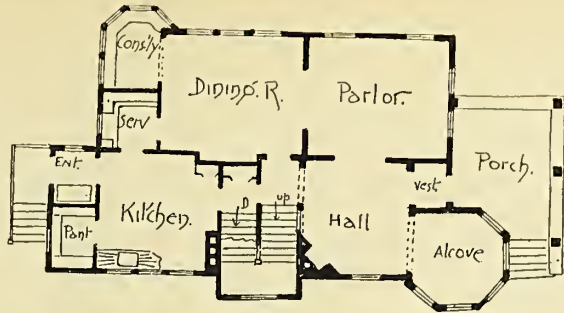
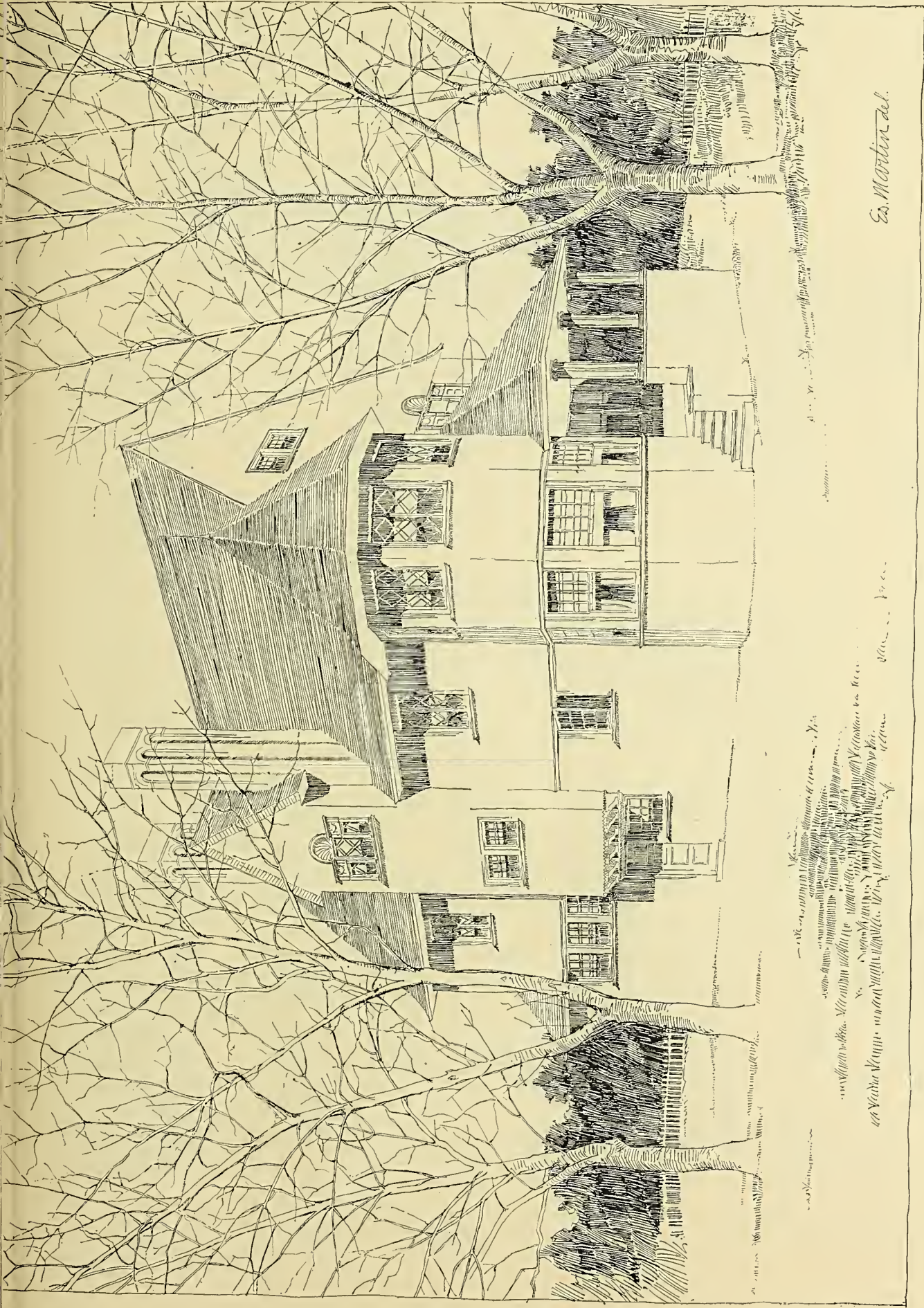
PERSPECTIVE VIEW OF GALLERIES OF FINE ARTS, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, OCTOBER, 1891.

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PERSPECTIVE VIEW OF FISHERIES BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, DEPARTMENT OF CONSTRUCTION, OCTOBER, 1891.

HENRY IVES COBB, ARCHITECT, CHICAGO.



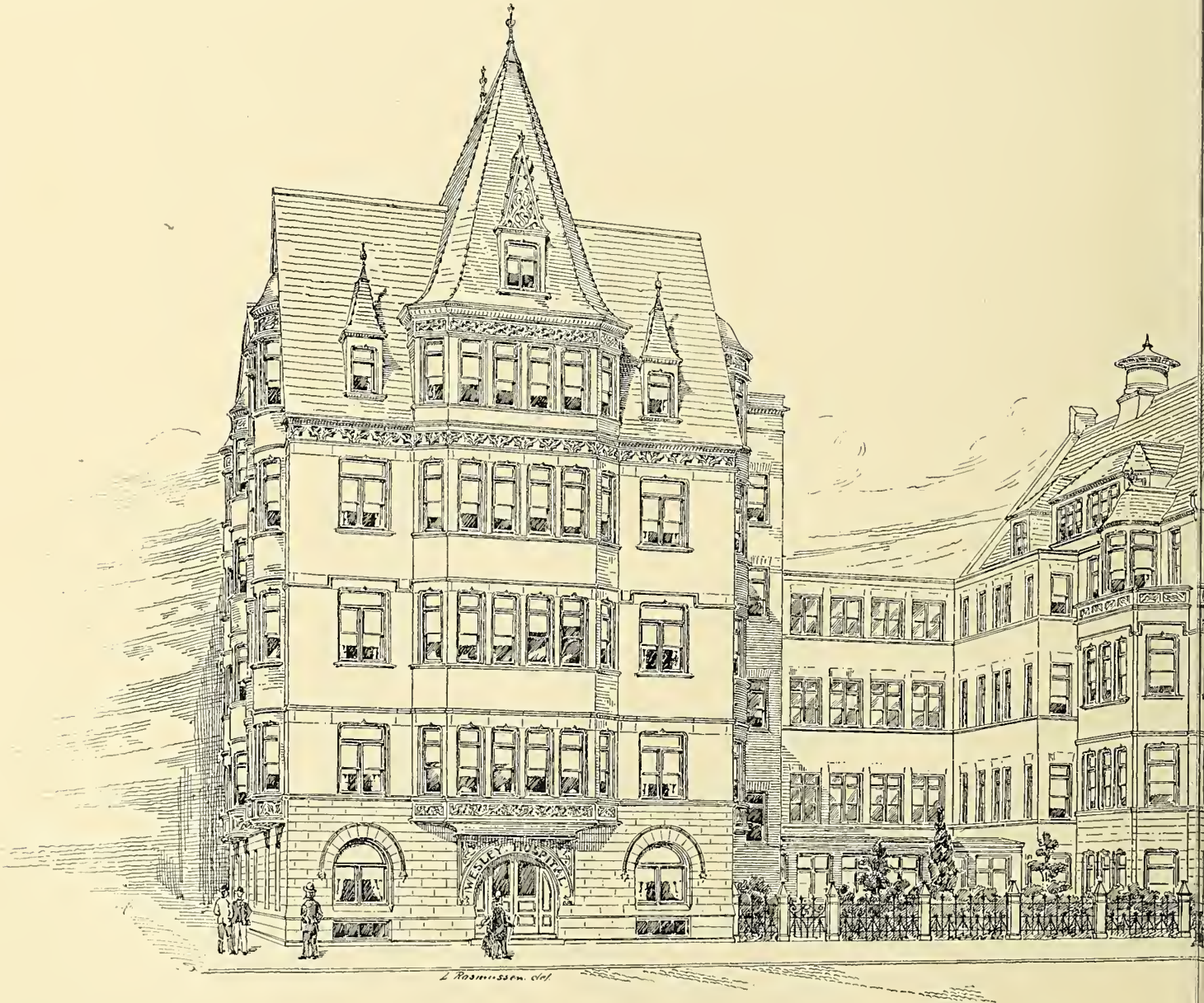
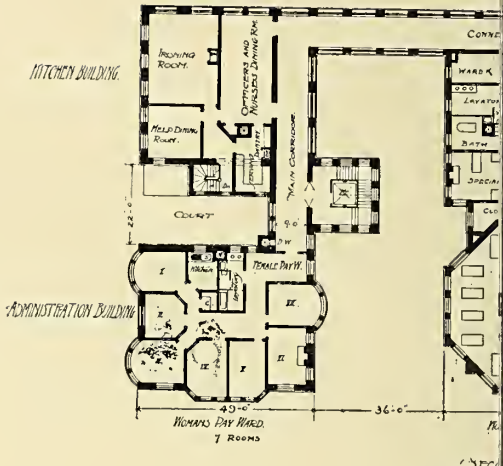
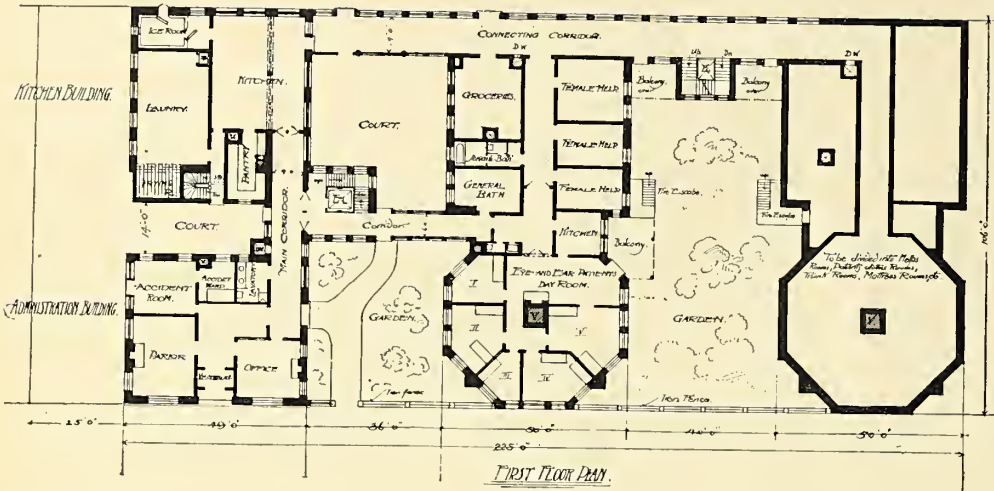
RESIDENCE FOR J. K. ARMSBY, JR., EVANSTON, ILLINOIS.

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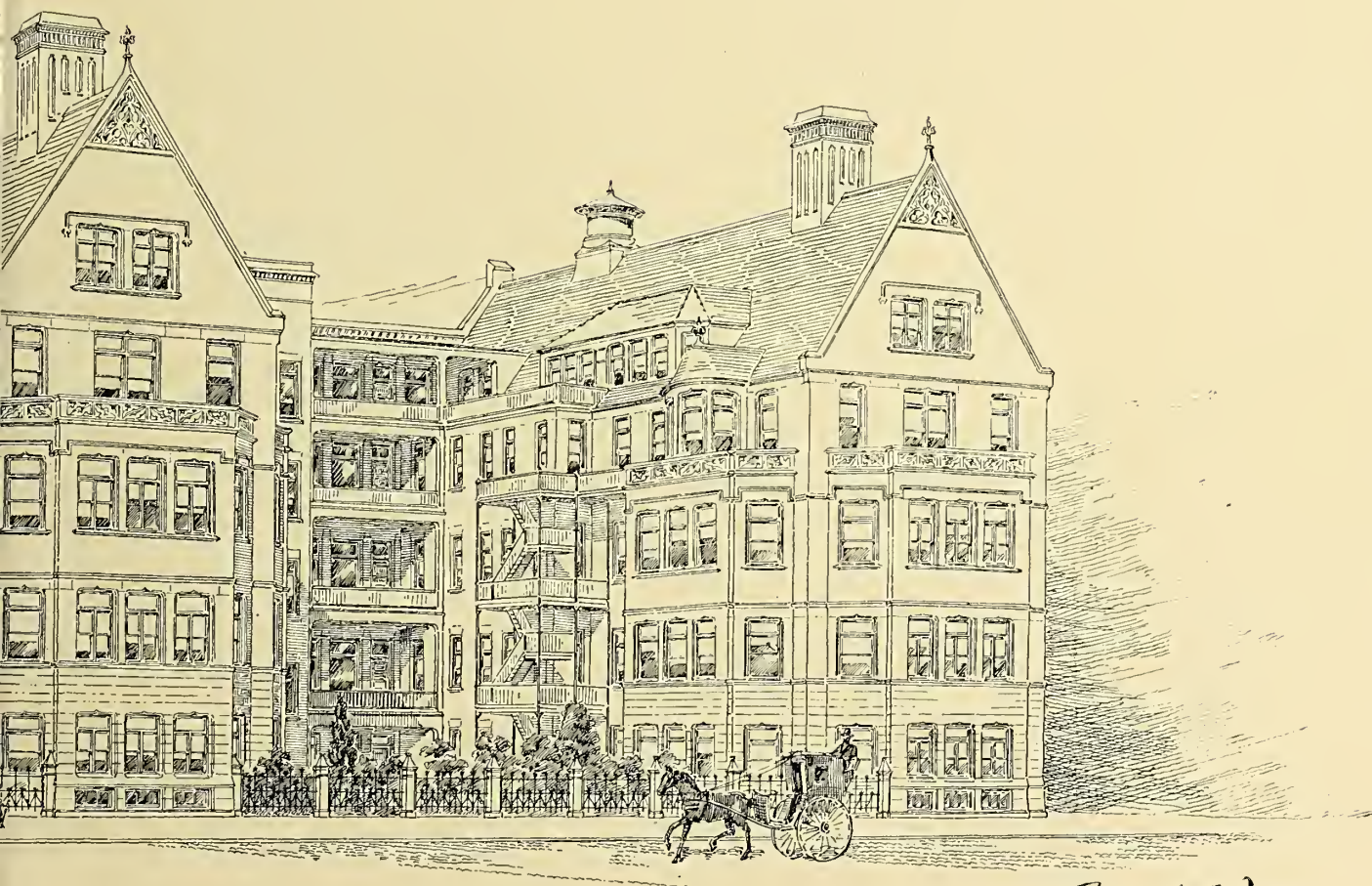
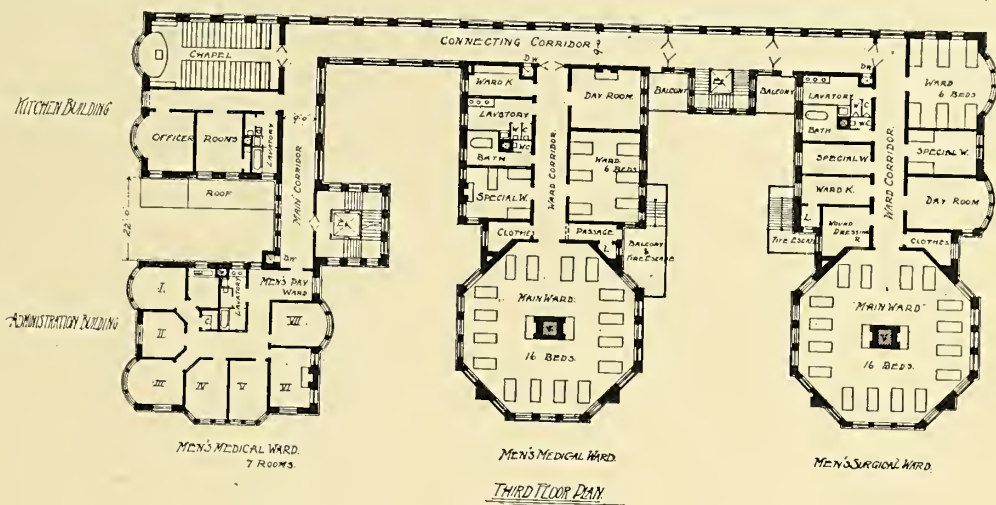
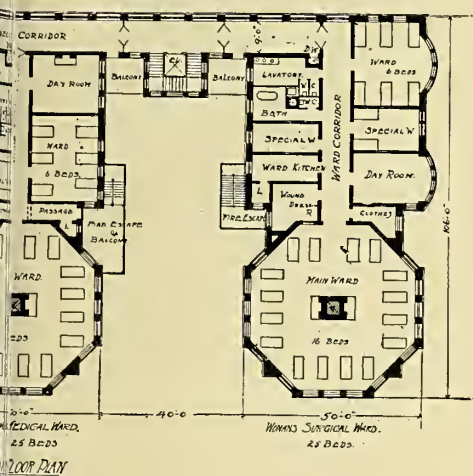


J. A. Schweinfurth del.

J. A. SCHWEINFURTH ARCHT BOSTON.
 DESIGN FOR BUILDING FOR AM. FINE ARTS SOCIETY N. Y. SUBMITTED BY IONIC

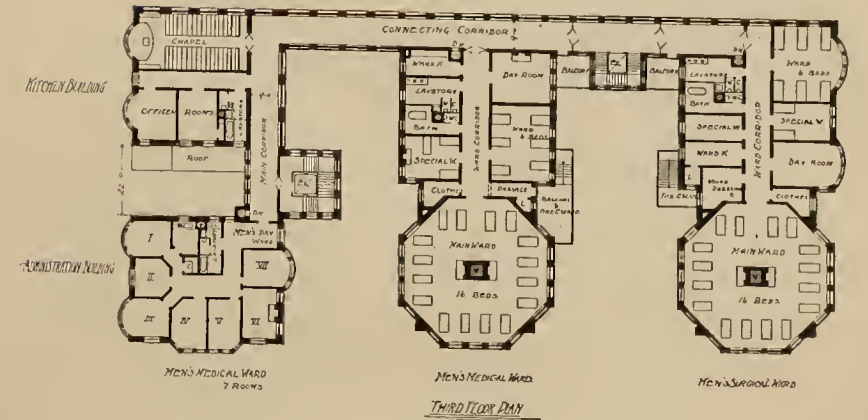
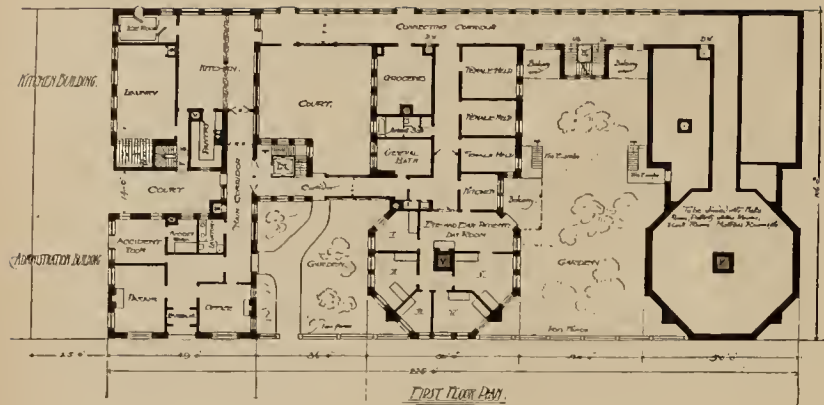


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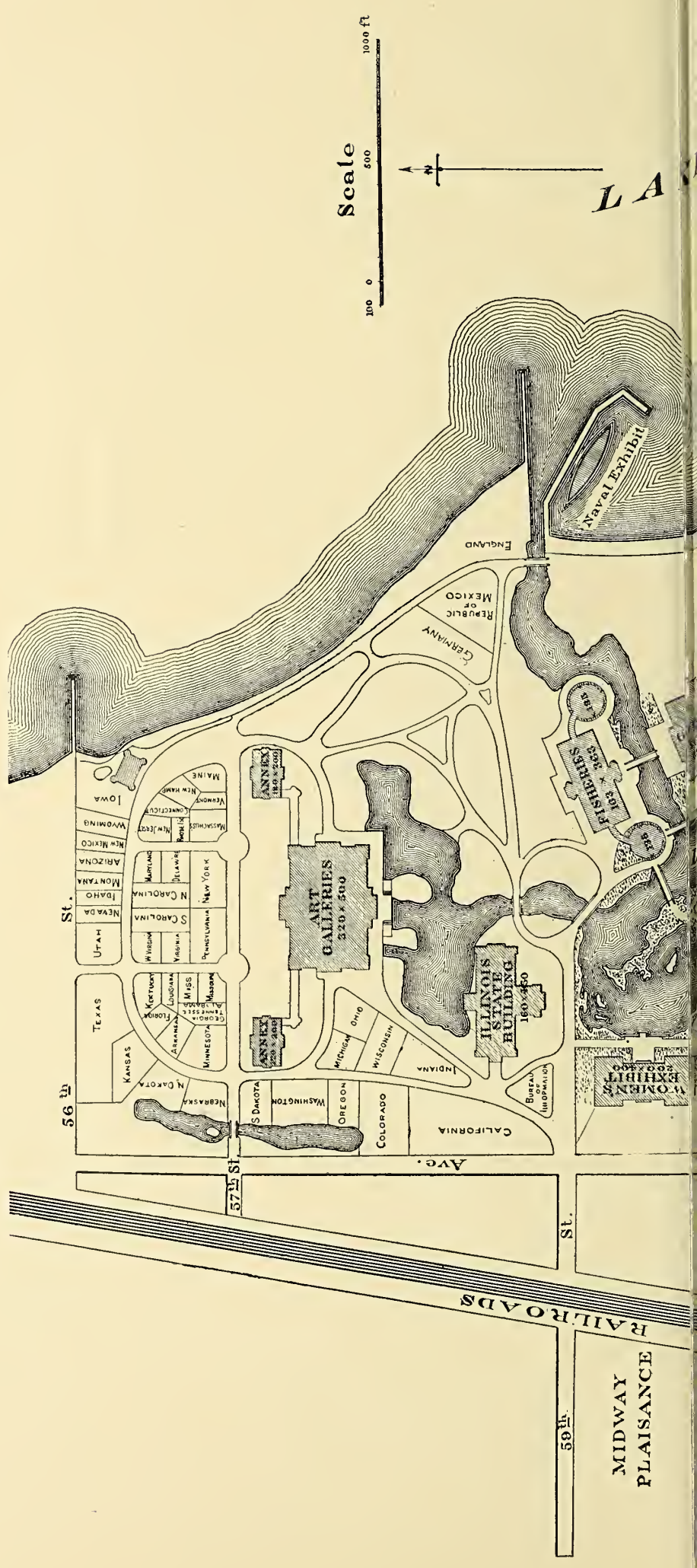
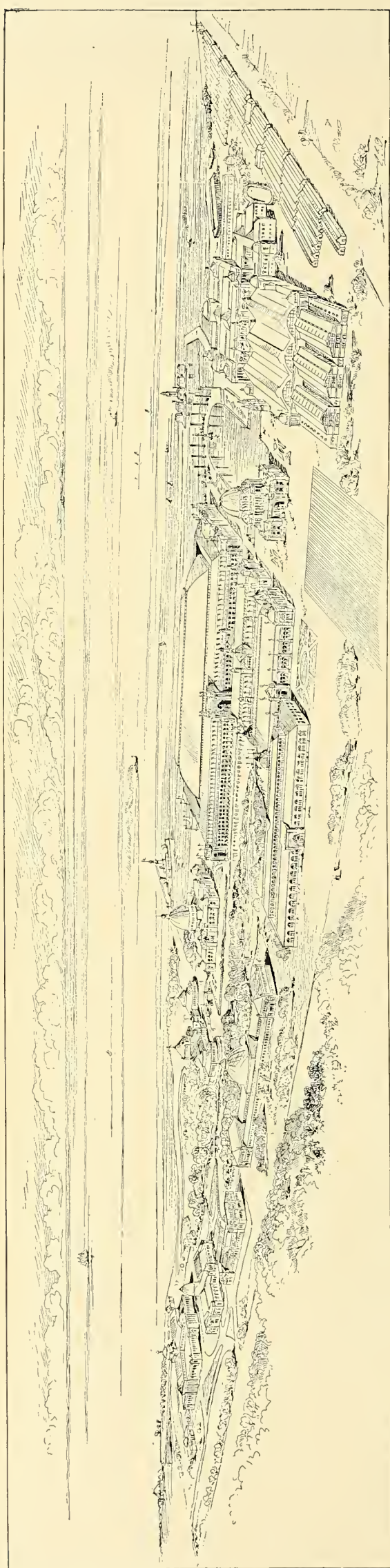
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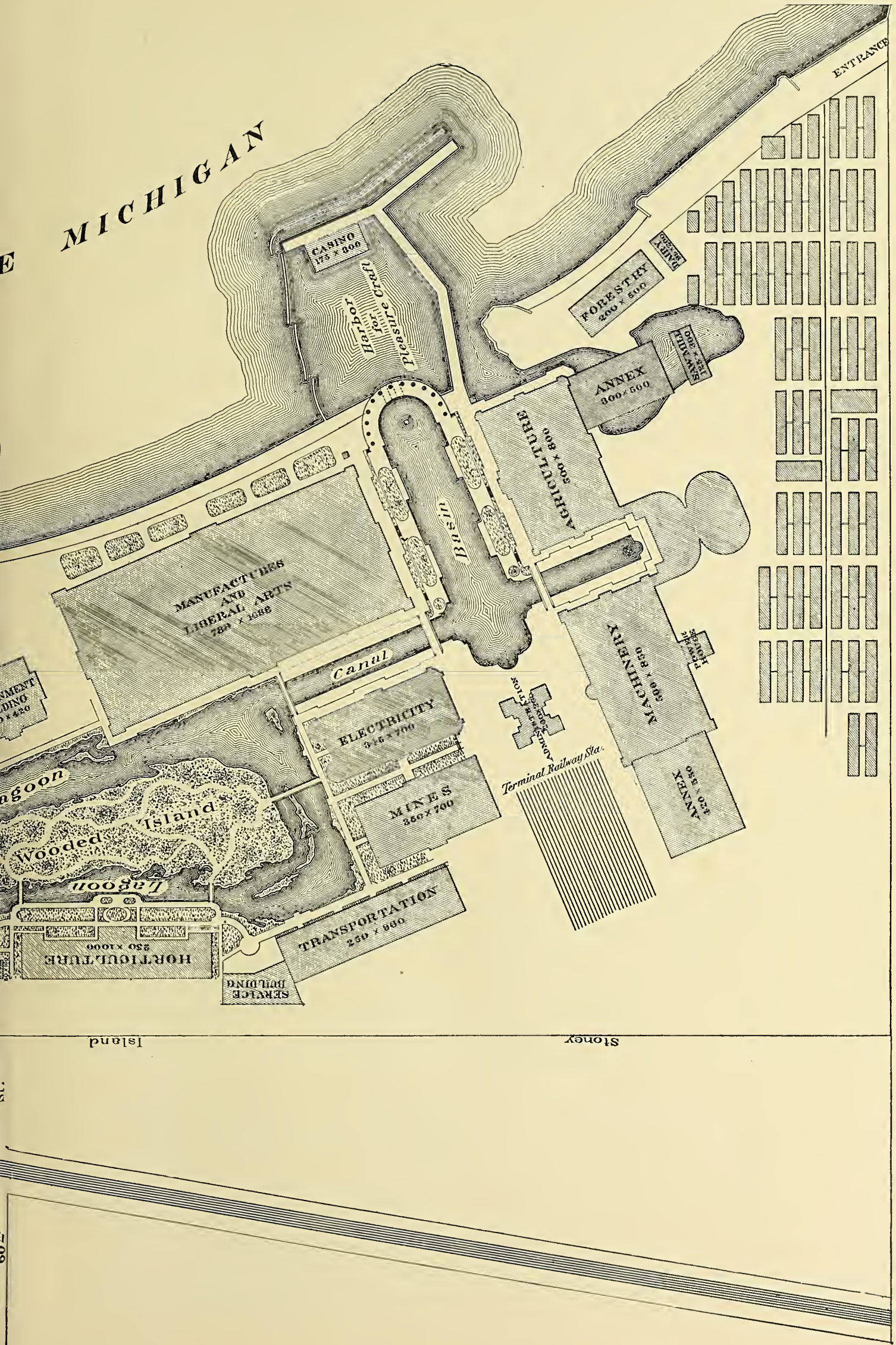


Treat & Foltz
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OFFICIAL PLAT OF GROUNDS AND BIRD'S EYE VIEW OF WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

APPROVED AND ISSUED BY DEPARTMENT OF CONSTRUCTION, SEPTEMBER, 1891.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

NOVEMBER, 1891.

No. 4

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to
ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photogravures), 75c. Intermediate number, 10c. Advance payment required.

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Twenty-fifth
Annual
Convention
A. I. A.

The convention at Boston was the largest in attendance of any in the history of the old Institute, and almost rivaled in numbers the conventions of the Western Association. The election of Edward H. Kendall, of New York, gives the Institute for the coming two years a president who will represent the Institute with grace and dignity. Mr. Dankmar Adler, the secretary, is too well known in association affairs to need extended mention. His work is always thorough, his judgment sound, and he has the confidence of every member. The work done by the convention was not as far reaching as it might have been, owing to the loss of a secretary early in the year, and consequent confusion. The various committees, however, were continued, and as in the future all papers and reports are to be printed and circulated to the members a month in advance of the convention, members will probably come to the next convention with concentered ideas, instead of the vaguest kind of impressions. The president's address was a masterly effort, and gives a fair synopsis of the present architectural status in this country, as well as a sketch of those events leading up to it. Probably the most important committee appointed was that upon World's Fair matters, and as ex-President Hunt is chairman of this committee, and intimately acquainted with many foreign societies, his committee will give valuable aid in securing coöperation of foreign societies in the preparation for a world's congress of architects in 1893, and an architectural exhibit in connection therewith. The place of next meeting was not decided upon, being left to the directors at their January meeting, or a future meeting of the Executive Committee.

The Chicago
Public
Library
Competition.

The city of Chicago is to have a public library to cost a million and a half, to be erected on one of the most prominent lake shore sites in the city, to be a whole block long and half a block wide and to start out with an equipment of five hundred thousand volumes. It is also to be erected of enduring granite, "to withstand the ravages of time," as we are informed by the daily press. Of course there is to be a competition. Five architects are to receive \$1,000 each for some drawings, and every one else who wants to may come in as outside scrambler. But the astute building committee has apparently determined to hold a close rein on the architects, it has invited and limited their capacity for mischief to the more unimportant and chiefly ornamental parts of the building. The architects are not to make the plans nor meddle with them unnecessarily. This has been attended to by the committee itself, which, with the president of the library, has spent six months on the plans, and has had them all drawn out in detail with sections, etc., showing the shapes, sizes, location and arrangement of all the rooms, offices, stairs, etc. As these plans have been published in the daily papers, architects are now afforded a rare opportunity to enlighten themselves as to the correct practical way of designing libraries, and they will, perhaps, appreciate a few "pointers," as business men say. There will be a reading-room on the first floor, 50 by 52 feet in round numbers, to accommodate ninety persons, who will climb the stairs to the delivery counter

on the second floor, twenty-two feet above, every time they want to get a book, return it or change it. This room is doubtless for juveniles, who do not mind stair-climbing, rather like the fun, in fact. Thus their visits to the library will exercise mind and muscle together. On the second floor the general delivery-room and counter occupy nearly as much area as the whole of the four book-rooms, which are to contain the five hundred thousand volumes. This seems to anticipate a lively demand for books and for frequent changes of books. But, after getting the book, there is no visible place where one can sit down to read it, unless he redescends to the 50 by 52 reading-room on the ground floor, twenty-two feet below, or ascends another flight to the third floor and traverses the whole length of the building to the reading-room on the Randolph street end. It is more than likely that the novel idea of locating the reading-rooms so remotely from the delivery desk and on different floors at the opposite extremes of the building would never have occurred to an architect, hence it is especially noteworthy. Of the four book or stack rooms, each about 40 by 50 feet, all but one receive light from one side only, except what may be furnished by skylights. Any one familiar with the close arrangement of books in a "stack" will see how completely this arrangement prevents the fading of the covers and bindings of the books from excessive illumination. Skylights are mentioned, but the section shows two stories of rooms for periodicals over one of the book-rooms, where, therefore, the skylight will hardly avail for the lowest floor. Nothing appears on these plans in the way of a reference library, nor of a reading-room for papers and magazines, nor for conversation-rooms, study-rooms, etc., nor for pictures and bric-a-brac. No elevators are shown, nor dumb waiters, and no toilets. A common failing with architects is to fill up a building, more or less, with "notions" of this kind. There is, at the Randolph street end, a memorial hall and an assembly hall, accessible only by the entrance at that end. This, however, merely balances the fact that the library and its reading-rooms are accessible only by the Washington street end. One end has no advantage over the other in this regard. It should not be forgotten that, so far as known, the building committee, which has worked out these instructive plans, has never accomplished nor attempted the planning of a library before, nor, indeed, of any other public building. In view of their success the query naturally arises, "Why did they not take another six months and design the exterior also, instead of paying five thousand dollars to architects and giving them till January 2, 1892, to do it in?"

The Lewis Manual Training School. Under the terms of the will of the late Allen C. Lewis, of Chicago, that city will soon have a large and completely equipped training school added to its list of educational institutions. Ground half a block in extent on the corner of Morgan and Van Buren streets is donated as a site, and the buildings thereon are being removed preparatory to breaking ground for the proposed structure. Chicago, next to Philadelphia and New York, leads the cities of the country in the matter of training and trade schools. It has introduced manual training departments into its public schools, its citizens have maintained for years a splendid manual training school that has already turned out young men that will do honor to those who placed the means of

obtaining an education for their hands as well as their heads at the disposal of the youth of the city. The bequest of Mr. Lewis goes farther and permanently endows the school which his munificence is building; and the example will lead wealthy men, not only in Chicago but in other cities, to provide less for the wrecks already cast upon the shore of misfortune and more for those about to build the ship that is to carry them, and aid them in building wisely and well, and so train them in its management that a safe voyage will come to every prudent sailor. It is better to prevent than to mend, and in this country, with its population gathered from all countries, and where the success and fame of the country depends upon its productive capacity, there cannot be too many opportunities open for the young to learn trades and see in them a most honorable career.

The Womans' Building at the World's Fair. Among the wonders with which the World's Fair will edify the nations will be the spectacle of a building of large proportions and handsome design, erected and superintended entirely under the direction of a woman architect. While this is not the only instance of the kind in the United States, it will be the first which most of the visitors to our Fair will ever have seen, and it will undoubtedly attract a great deal of attention and will lead to an immediate increase both in the number of lady pupils in architectural schools and the number of schools open to them. Yet it would be premature to anticipate a large and permanent influx of women architects in the profession. The physical difficulties of superintending and of acquiring that practical knowledge of detail which comes only through superintending, must constitute a permanent barrier to success in this line which will always confine the number of women architects, probably, within narrow limits.

The Field for Women Architects. But there need be no lack of employment for all the architectural knowledge and talent women may acquire in the design of artistic furniture, for which the field is unlimited, and in the invention of decorative detail for house interiors such as grilles, mantels and fireplaces, chimney nooks, etc. Those with a talent for color may turn to stained and decorative glass or to mosaic, or to mantel design in marbles and other ornamental stones. There are firms which make a specialty of stair building, and require new designs for newels, balusters, railings, etc., and for new arrangements of stairways. These are a few of the occupations now open to women capable of making working drawings and possessed of architectural taste.

Building Theory and Practice. Architects sometimes have their fun over the mistakes which contractors fall into when they essay anything beyond the line of their experience in architectural matters, and contractors in turn entertain themselves with the odd things dropped by the man more familiar with the T-square than with the mortar shovel. The latest story is on the contractors' side. A number of massive cast-iron "stools" were being placed on footings of iron beams and concrete, to carry a stack of interior columns some twelve stories high. The architect discovered what struck him as a strange omission, and asked the contractor why he had not bedded iron rods into the concrete footings so as to run through the stools and hold them firmly in place. The contractor's reply was, that when the building was finished he would "place a prop on top of it, to hold it down."

Architecture and the Allied Arts.

BY BARR FERREE.

PART IV.—Continued.

GOTHIC architecture in Italy may be briefly characterized as one in which the wall, as distinguished from the opening or window, is the chief feature. In the North it is the opening, be it doorway, arch or window, which makes up the chief features of the architecture and defines the ruling lines of the building. In the South a large part of the general result depended on the paintings for which the unbroken walls afforded ample facilities. In the North

the richness of the architectural features rendered another system imperative. Primarily this is dependent on the difference in climate, the warm temperature of the South necessitating small openings, while the cold of the North as naturally suggested large ones, in order to admit as much of the light and heat of the sun as possible. Attention to this simple natural law would never have produced such striking results in the North had it not been for the invention of painting on glass.

Painted glass is, in truth, the art of the middle ages. It is the one feature which had never been used in the other great styles. It is the art which received the most characteristic development from the hands of mediæval artists, supplying



STAINED-GLASS WINDOW FROM CHARTRES CATHEDRAL.

the most striking and brilliant monuments of mediæval art. Almost before its technical processes had been mastered it was eagerly adopted as an effective means of decoration, and in a comparatively short space of time it became the leading element in Gothic architecture. Windows were made as large as possible and were opened close up to the roofs, which were compelled to conform to their shape in order to gain space for this decoration. The brilliancy of Italian wall paintings pales beside the colors that were wrought into the windows of the great northern cathedrals, for no architectural decoration equals the effect of a great clearstory ablaze with the myriad colored lights of the windows. Yet these brilliant results were brought about by the simplest processes. The windows were made up of small pieces of glass of solid color, held in place by a framework of lead. A few dashes of neutral tint applied by the brush gave scarcely more than a suggestion of shading. The effect was obtained by the use of broad pieces of color, and in the earliest and best specimens there is no perspective nor blending of light and shade. This system, and the further fact that the outlines of the figures, being in reality the frame which held the glass in place, were much more pronounced and irregular than they would be in any painting, places an impassable barrier between the art of stained glass and mural decoration.

Mr. Moore, "Development and Character of Gothic Architecture" (p. 69), maintains that the increase in the size of the clear-story windows was independent of the use of stained glass, and was the natural development of Gothic architecture. This is undoubtedly true if the word Gothic is confined to structures which represent the

most complete development of the vault and arch, but it is certainly not unreasonable to conclude that the mediæval builders, who evinced a wonderful degree of sensibility to the requirements of climate and other natural conditions, may have been further influenced by climatic reasons for the persistent forms of openings used in the North and South. The desire for light and a surface for decoration may have suggested the structural evolution that was afterward characteristic of both regions.

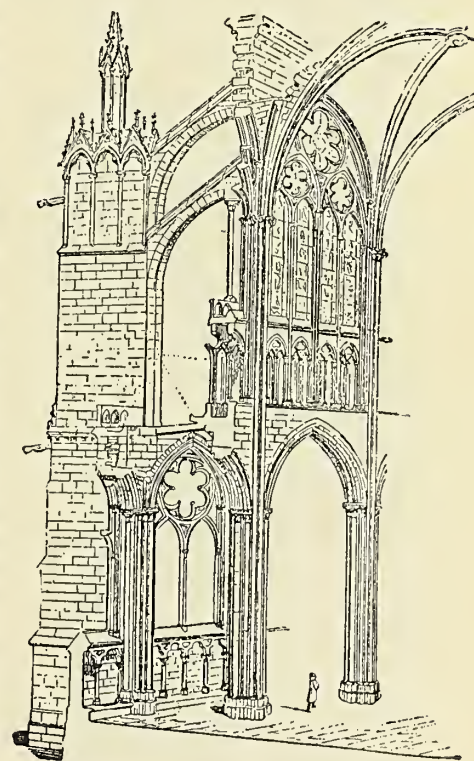
A glance at the structure of a northern cathedral will show how admirably this decoration was suited to the architecture, and, conversely, how admirably the architecture suited it. The typical cathedral had, first of all, a nave, on which opened the aisles, one or two on either side. These aisles were lighted by windows which were made as large as possible, not only that a good light be had to illumine them and the lower part of the nave, but that a large space be secured for painted glass. Above the arches which separated the nave from the aisles was the triforium or gallery, a series of blind arches which opened into the space formed by the roof of the aisles. Sometimes these were closed and ornamented with a painted decoration or left plain, but as a rule they were open. Over these sometimes ran another row of arches forming an arcade, as may be seen in the Cathedral of Laon, and above were the windows of the clear-story. More generally, however, the clearstory windows opened directly above the triforium. These, like the windows of the aisles, were made as large as possible.

In later times, when the details of construction had been mastered, and the architects were no longer put to the necessity of experimenting in statics, the clearstory windows presented an almost unbroken field of glass and offered an unexcelled opportunity for the use of this most effective style of decoration. The whole structure thus consisted of a series of arches. The weight of the building was concentrated on certain points, and the walls, becoming mere curtains that simply filled the space not occupied by the windows and arches, lost their constructive functions. In such a system there was no opportunity for the large wall paintings that formed the chief features of southern buildings, for there was absolutely no space on which they could be exhibited.

Nor was this the only reason for not employing them. The brilliancy of painted glass is of one kind, and that of a wall painting of another. Each has its own field; apart, they shine with undimmed luster, but place them together and the colors of one look tame and insignificant beside the other. Each loses part of its own brilliancy without adding to that of the other. The mediæval architects were too good artists and understood too thoroughly the laws of combination and color to permit such a solecism, and the two forms have not often been placed in conjunction.

It should be remembered that this applies to painted glass containing representations of scenes and incidents. Colored glass was used to a more or less extent in all the churches of Europe, but there was not often a full, free use of it in conjunction with a corresponding development of wall painting or decoration. There were some exceptions, notably the Sainte Chappelle of Paris, in which the lower portions of the walls were filled with a rich colored decoration and the upper part occupied with painted windows.

While painting on glass was the chief dependence of the Gothic architects, it must not be inferred that they neglected other methods or failed to avail themselves of all possible aids. Painting on glass had the great merit of surpassing beauty and remarkable brilliancy, but it also had the disadvantage of perishability. Scarcely one of



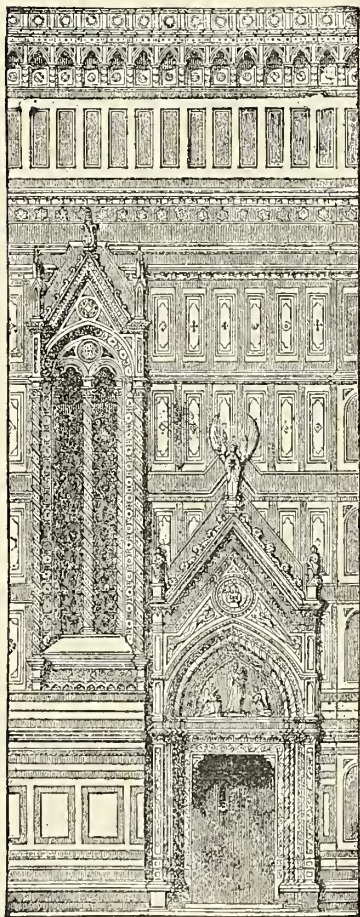
FLYING BUTTRESSES IN NAVE OF ST. DENIS.

the great cathedrals has retained its painted glass complete to the present day. France, where it reached its finest development, has been too frequently plunged in war to retain much of so fragile a substance. Enough has, however, remained to enable us to estimate its glories in the days of its perfection. The Cathedral of Chartres retains nearly all the mediæval glass in its 146 windows, and many lights still remain in the cathedrals of Tours, Troyes, Bourges, and other great churches. In France, no window has received more attention or was more elaborately decorated than the great rose window which was an important feature in the façades of nearly all the cathedrals. On these the builders lavished the utmost resources of their art in sculpture, designing the most fantastic and complicated forms conceivable and filling in the open spaces with brilliant glass. The window on the west front of Chartres Cathedral is a remarkable example; it contains a representation of the Last Judgment. Other splendid specimens are to be found at Reims, Amiens, Evreux, Tours and S. Ouen at Rouen.

In England, time has been scarcely more kind toward painted glass than in France. The most characteristic development is now in the east window over the high altar. In France a cluster of chapels formed the furthest end of the cathedral; in England the west end was square and almost completely filled by a great painted window, which thus became the most conspicuous feature of the interior. These walls of glass—for they were nothing else—are among the most striking features of an English cathedral. It is somewhat remarkable that the French should have made the window over the doorway the most important one in their churches, while the English made that over the high altar, which had frequently a sculptured reredos.

Of the accessory arts, painted glass more nearly approximates mosaic in its general effects. The Romans employed pieces of glass

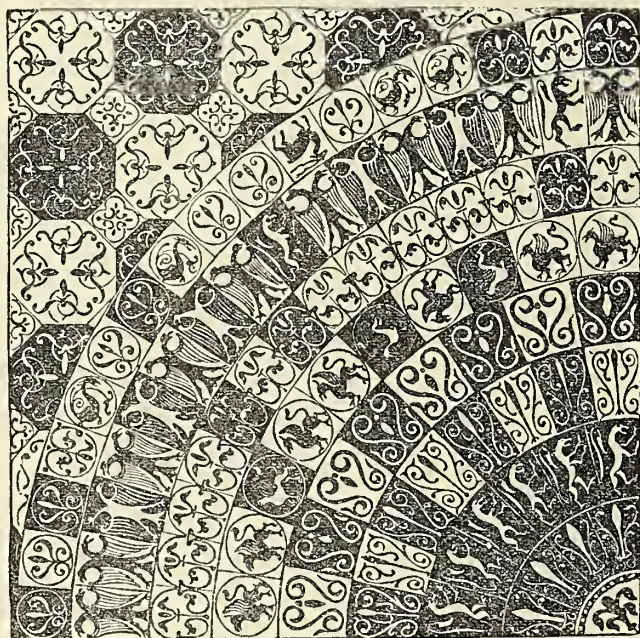
of various hues to eke out the stones of the mosaic. The effect of mosaic is much more brilliant than that of painting, though it never had the intense body of color shown by glass, which may be not inappropriately compared to transparent mosaic. Mosaic, as we have seen, was first used on a large scale as a wall decoration by the Byzantines and those who followed their methods or worked under their influence. Many of the older churches of Italy, of which S. Vitale at Ravenna is a conspicuous example, abound with this work, which was practiced to a relatively late day. Much of the drawing was crude, but the colors were extremely brilliant and rich, while the gold background added to the splendor of the result. It was used both on the outside and inside of buildings, and had an advantage over painting in being able to withstand the ravages of time and climate. Those storehouses of Italian Gothic, the cathedrals of Sienna and Orvieto, are both decorated on the exterior with mosaics, which add very materially to the



EXTERIOR DECORATION OF CATHEDRAL AT FLORENCE.

effect of the façades. These mosaics are pictures, representing scenes from scripture or tradition, but another kind of mosaic, an inlaying of colored stone on the surface of the wall in geometrical designs or arabesques, was exceedingly popular in certain parts of Italy and became a characteristic decoration. The Cathedral of Florence, which ranks among the greatest of mediæval cathedrals, has its sides entirely covered with an inlay of this kind, in which a veneer of costly marble forms a decorated surface. The system was peculiar to Italy, and was doubtless a survival of the Roman system of veneering. The edifice was thus apparently constructed on the

costliest stones. The exterior walls were ornamented, not as in the North by buttresses, flying buttresses and like adjuncts, but by this ornamental design, which offered no relief and whose merit was the beauty derived from the color of the various stones which entered into its composition, not from any structural conditions. It frequently happened that funds gave out before the decoration was completed, as it was very expensive. Parts of churches have remained to the present time in the bare, rough, unfinished state in which their builders were forced to leave them. The Cathedral of Florence itself is a striking example of this, the façade never having been decorated by its builders, but remaining in an uncompleted state to our day, when the enthusiasm of a united Italy produced the funds required for its completion. The system is one that cannot be commended on structural grounds, since there was no integral connection between the mass of the building itself and the decoration. In northern Gothic these two elements were so closely united that even where the building has been partially suspended there is sufficient to excite attention and indicate what the whole was to be. In



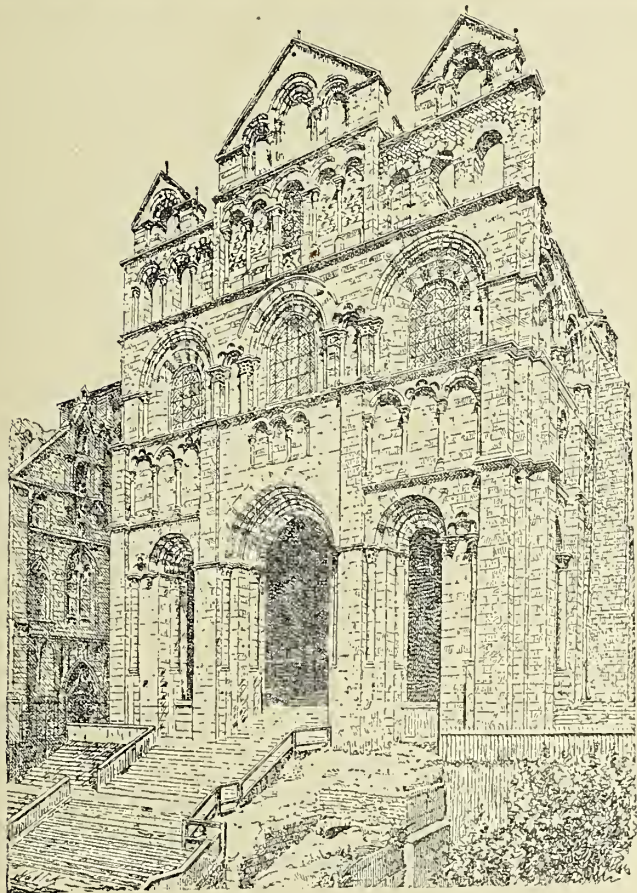
QUARTER SECTION OF PAVEMENT IN CHURCH OF S. PIERRE-SUR-DIVE, CALVADOS.

the South no just conception of the edifice is possible without the external veneer.

Few northern cathedrals exhibit mosaics, either externally or internally. The art reached its fullest development in Italy, and it is probable that a lack of the necessary technical knowledge hindered its wider use in the North. In mediæval times the methods of communication were inconvenient and slow, and the cost of bringing workmen skilled in foreign arts too great to be borne by ordinary builders. There is a large mosaic over the entrance to the south transept of the Cathedral of Prague of the Last Judgment, but it was, probably, judging from its style and the inscription, by artists brought from Italy. In the North, mosaic was sometimes used as pavements, as it frequently was in Italy. One of the most important is in the crypt of S. Gereon at Cologne, by Italian artists. In France similar pavements are sometimes to be found, of which that of the church of Cruas (Ardeche), is an example.

A rich effect was frequently obtained by the use of different colored stone in the structure itself. The most ambitious as well as the most successful work of this kind is to be found in Italy, where an abundance of building stones of various colors afforded ample opportunities for this kind of polychromy. Other examples are found in the volcanic districts of France. Black and white is a favorite combination. The cathedrals and baptisteries of Pisa and Lucca are built of courses of white stone with thin black courses at regular intervals, the construction being visible on both the external and internal face of the structure. Sometimes other colors were used, as in the Palazzo Pubblico of Perugia. The cornices and string courses of this building are carried on corbels, the spaces between which are filled with red marble, which helps to make the shadow deeper and more marked. The shafts of the windows are of red marble, and the tympanums of the doorways are of the same material, with figures in white. In France the church at Vézelay is an example of walls built in black and white alternate courses, both on exterior and interior.

The church of Puy-en-Velay has a façade of white sandstone and black lava arranged in alternate layers. In England there are not many buildings of this kind. The parish church at Ischester in Northamptonshire is built with horizontal courses of dark red and light stone. Flint is sometimes employed, as on the north side of Rochester cathedral, where there is a course of chequer work in flint and stone under



FACADE, CHURCH OF PUY-EN-VELAY, FRANCE.

one string course and two courses of flint separated by one of stone under another. The groining of the vaults in the cloisters of Westminster Abbey are in chalk with occasional lines of a dark red stone.

Besides the forms of mosaic and kindred decoration that have already been noticed, the art of marquetry or inlaying was practiced to a considerable extent in Italy. Three kinds are to be noted, a marquetry of wood, of marble and of enamel, all similar in general style and effect, but differing in material. The inlay of wood is well illustrated in the stalls of the chapel of the town hall of Sienna, and in the stalls of the choir of the cathedral at Pisa. Examples of marble inlay are to be found in the altar and pavement of the baptistery of Pisa, the pavement of the baptistery of Florence, and the pavement of the cathedral of Sienna. The gorgeous silver shrine of S. Giovanni in the cathedral of Florence is a splendid specimen of enamel inlay.

Somewhat allied to the use of colored stones in building is the employment of terra cotta. It was most largely used in Italy where this form of art originated. The brick and terra-cotta architecture of Italy form an interesting and beautiful as well as thoroughly characteristic series of structures. The ease with which this material can be molded into any desired form presented unrivaled opportunities for original and varied work that Italian builders were not slow to take advantage of, and as a matter of fact the terra-cotta buildings offer a more extended variety of moldings and ornament than do the stone ones of the same epoch. The warm red color of the material is generally retained, but sometimes other colors are used. Later, the invention of glazed earthenware gave the Renaissance artists a material closely allied to terra cotta, but they never excelled the early Italians in the originality of their work. The characteristics of Italian terra-cotta architecture are derived almost entirely from the ornamental features which admirably express the material of which they are composed. In many respects these buildings stand quite alone, and it is interesting to notice that their chief claim to consideration as the products of an individual style rest both upon the material and the ornament evolved from it.

(To be continued.)

President Richard M. Hunt's Address*.

GENTLEMEN AND COLLEAGUES, — How appropriate that our annual convention should be held here today — to welcome this Chapter on having attained its majority — it being just twenty-one years since the Boston Society of Architects made application, and was recognized as a Chapter of the American Institute of Architects in December, 1870.

Since then two conventions have been held in this city, the fifth, in November, 1871, and the eleventh, in October, 1877.

In 1871 we had the good fortune to be presided over by the first President of the Institute, Richard Upjohn, who held that office during a period of sixteen years. Thomas U. Walter, the second President of the Institute, and who served this association during twelve years, presided in 1877. Their addresses then, as on all similar occasions, were full of earnest thought, professional pride and good advice, worthy of our most careful consideration; and to them we owe much for the steady progress of the Institute which they served to the very end of their careers.

At the convention held in Cincinnati, 1889, the consolidation of the American Institute of Architects with the Western Association of Architects took place, when it was very wisely decided that no one should hold the office of president for more than two successive years. Having been elected to the presidency on that occasion, I will now proceed to deliver my farewell address.

Since our last convention, we have to mourn the loss by death of six Fellows of the Institute: John W. Root, of Chicago, Ill.; O. P. Hatfield, of New York; E. T. Littell, of New York; John W. Hammond, of Frankfort, Ind.; Herbert C. Burdett, of Buffalo, N. Y.; John Otter, of Chicago, Ill.

In the death of our late secretary, John Wellborn Root, the profession at large has sustained a great loss; while those of us who knew him must ever cherish the memory of one so genial and kind-hearted. He was a man of culture, indomitable energy and great executive ability, as his numerous works testify, many of which show marked originality. A short time before his death he had been appointed Consulting Architect of the Columbian Exposition, an office for which he was admirably well fitted.

O. P. Hatfield, our former treasurer, and Emlen T. Littell, the late president of the New York Chapter, were both men of ability and sterling worth, who during many years gave proof of their devotion to the Institute.

Mr. George C. Nimmons, under Mr. Root's direction, was actively engaged in the publication of our last proceedings at the time of Mr. Root's death. He was therefore appointed secretary *pro tem.* by your Board of Directors in order that he might complete this work so satisfactorily commenced. Later, at the urgent request of your Board, Mr. Dankmar Adler accepted the position of secretary. I am sorry to add that in the transfer of the secretary's documents, several were mislaid or lost; among others, a number of Chapter charters signed by me, and which awaited the signature of the secretary, and of which, I understand, one only was signed by him.

During the past year two new Chapters have been formed, our membership has steadily increased, and I rejoice to add that our financial condition is satisfactory.

In the report of the Board of Directors, which will presently be submitted, your attention will be called, among other matters, to the urgent necessity for some decision on certain points relating to the admission of Fellows and the formation of new Chapters — an important matter discussed at the last convention, but left unsettled.

In view of the fact that I was unable to be present at the last convention, I beg permission now to express my opinion concerning the advisability of requiring all members of the Institute that may hereafter be elected to belong to one of its Chapters. My reason for believing that this should be made compulsory, is that everything possible should be done to strengthen the Chapters; on their vigor the life of the Institute depends; without the Chapters the Institute could accomplish little, if anything. Each Chapter should be in constant touch with its surroundings, and should keep watch of all matters of interest to the profession, and should be ready at all times to give warning or advice, as the case may be. How, otherwise, would it be possible to introduce the many needed improvements pertaining to our calling, the want of which is so sorely felt throughout the country, such as proper building laws, guidance and advice about the location and the designing of public buildings, the laying out of streets, public squares and their protection, etc.? Daily, matters of public interest present themselves about which we should give our professional opinion firmly and fearlessly. If necessary, we should be aggressive, ever ready to expose any scheme, which, if carried out, would prove detrimental to the public good. Such work cannot be done at our annual conventions; it can alone be accomplished by the Chapters, and such work, properly directed, would be beneficial not only to the general public, but to every follower of our profession. I consider it, therefore, the bounden duty of every member of the Institute to aid the Chapters in every possible way. If unable, on account of professional engagements or otherwise, to give one's time to such good work, one should at least bear his share of the expense incurred in its vigorous prosecution.

Marked progress in our art, both in design and construction, is everywhere observable; and, while it would be eminently proper at our conventions for the president to review some of the more prominent examples, it is obviously impossible, in view of the vast extent of our country, to allude to them other than in a general way. The noble edifice so generously offered for our use on this occasion is a notable example; a landmark to which future generations will point

* Delivered at the Twenty-fifth Annual Convention of the American Institute of Architects, at Boston, Massachusetts, October 29, 1891. Revised by the author.

with pride; an enduring proof of the cultivated taste of our time, and a glorious monument to the well-deserved fame of its designers, who, if I mistake not, were appointed by a board of trustees, after an unsuccessful competition. How fortunate that this board should have had the moral courage to express and to stand by its opinion! The thanks of the community are due to all concerned in the erection of such a pile, and their names should be inscribed in some conspicuous place, as a testimonial of the gratitude and esteem of their fellow citizens.

Much has been and yet remains to be said in favor of and against competitions; nevertheless, the fact remains that they are in vogue, and this method of procuring designs will probably obtain. It is only essential for us, therefore, to lay down sound rules and regulations which will insure fair play, and which we should strictly adhere to. The firm and dignified stand taken by many among us in regard to competitions is already producing good results, so that now it is not unusual for individuals and corporations to obtain professional advice as to how they should be conducted, and very generally the awards are now made by one of our own craft. This is as it should be, nor was it altogether unexpected. The public had only to be enlightened on the subject to willingly remunerate the professional man for the time, trouble and expense necessarily incurred. I grieve to add that, in so-called close competitions, designs are sometimes sent in by uninvited parties. I need hardly say that such action is injudicious and undignified, tending as it must to lower the standing of the profession. I am happy to add that this practice is gradually dying out.

An event of considerable interest to the profession has occurred since last we met. I allude to the method of procedure followed in obtaining designs for the principal buildings of the Columbian Exposition. The Chief of Construction and Advisory Board to the Committee on Buildings and Grounds reported several methods, as follows: 1st, The selection of one man for the entire work; 2d, General competition; 3d, Limited competition; 4th, Direct selection for each building.

In an exhaustive review of the different methods handed in by the Advisory Board, *direct selection* was recommended for the principal structures, with the proviso that the architects selected should meet in conference and agree upon a general scheme of procedure, and various other matters that might be submitted to them. This recommendation was adopted by the Committee on Buildings and Grounds, whose action was final, and it is to be hoped that there will be no cause for regret at their decision.

Believing that it may be of interest, I venture to state in a general way how the plan adopted has thus far worked. At the first conference, held in Chicago, of the ten architects selected, together with the Chief of Construction and the Consulting Landscape Architects, the duties and responsibilities of all were definitely defined, and the question of compensation, so far as the architects were concerned, agreed on. This latter question was rather an intricate one, principally on account of the limitation of employment, each architect being only required to furnish a general design, one set of full and complete general working drawings, and full details of all work of an artistic character connected therewith, together with such descriptions and instructions as might be necessary to elucidate fully his views as to construction and treatment. Everything relating to the construction and stability of the work was delegated to the Bureau of Construction.

A report on the various matters submitted to the conference was furnished to the Committee on Buildings and Grounds, and was adopted.

The various work was apportioned as follows, namely, Transportation building to Adler & Sullivan, Mines building to S. S. Beman, Horticultural building to W. L. B. Jenney, Fisheries building to Henry Ives Cobb, Entrances to Burling & Whitehouse, all of Chicago; Manufactures and Liberal Arts building to George B. Post, New York; Agricultural building to McKim, Mead & White, of New York; Electricity building to Van Brunt & Howe, Kansas City, Missouri; Machinery building to Peabody & Stearns, Boston, Massachusetts; Administration building to Richard M. Hunt, of New York. Each architect was required to submit his design at a subsequent meeting, with such suggestions as he might deem proper. It was decided that the last five mentioned buildings should be grouped around three sides of the great court or plaza, 800 feet wide, and extending from the lake inland over 2,000 feet, thus forming a court of honor, so to speak, to the Exposition, the two principal entrances to the Exposition, one by land, the other by water, being at either end; a pier, of monumental character, extending about one-quarter of a mile into the lake, furnishing ample accommodation for steamers and every kind of craft.

Just here let me say a few words about the site. You may remember that in the discussions as to the comparative merits of New York, Chicago and Washington for the holding of the Exposition, one of the arguments used was, that while elsewhere a good site for the purpose was not easily to be obtained, square miles were available in the environs of Chicago. It was not a little surprising, therefore, at one's first visit to the selected site, Jackson Park, on the lake shore, several miles south of the city proper, to find no small portion of it under water; the surface of the ground being, in many places, below the level of the lake. To the ordinary mind it was an impossible site; but to the genius of the Consulting Landscape Architects, Messrs. F. L. Olmsted & Co., is due the credit of overcoming the natural difficulties by the introduction of a novel feature, namely, a means of communication between the various buildings by water as well as by land, their general plan showing a great basin of water occupying the middle of a principal court, smaller lakes and ponds being supplied with water through various canals connecting them with this basin; the excavated earth obtained in making these water-ways to be used

for filling-in purposes, to raise the general level of the terraces surrounding the court on three sides, upon which would stand some of the principal buildings of the Exposition. This general scheme was at once approved, and, after various discussions, a revised plan showing the general layout of the ground was agreed on, submitted to the proper authorities and was adopted by them.

The architects in charge of the buildings about this court, after considerable thought and discussion, decided that it would be wiser to treat the façades on the court in a quiet way rather than attempt to vie with each other in the solution of that vexed problem, "Iron Architecture," a problem never yet altogether satisfactorily solved. The last two French expositions showed great merit in the adaptation of iron to architectural effects, but much yet remains to be accomplished before the artistic mind will be satisfied; and certainly, if Paris, with her multitude of artists and artisans of the highest grade, and having plenty of time for the study and execution of this problem, could not satisfactorily solve it, it would have been foolhardiness to attempt it on this occasion, the time being so restricted; besides which it would be well-nigh impossible to secure harmony in the several designs, whose authors were hundreds of miles distant one from the other. Furthermore, in view of the fact that in all probability examples in every style of architecture would be found in the vast number of structures to be erected, it was deemed advisable that the court should be treated in a dignified way, in the classic style — each one to be left free in regard to his façade; the only restriction being that the main cornice be fixed at a height of 60 feet above the terrace level, not including any prominent features, such as towers, etc. It was further deemed advisable, by introducing a dome or otherwise, to give prominence to the Administration building, located at the west end of the court, and at the intersection of the two main axes of the plan, one extending north and south, the other east and west.

Should the general effect of this court prove to be what its designers intended, I can but believe that it will be of benefit to the public and to the profession, a practical illustration of that dignity and repose so characteristic of classic architecture — features too often nowadays lost sight of in the search for originality, not to say eccentricity. It is useless, perhaps, to add that perfect harmony has reigned at all the conferences, which have demonstrated the great benefit resulting from an interesting and earnest discussion of the many important points naturally presenting themselves. These conferences have also accomplished much in strengthening the bonds of fellowship, not only among ourselves, but also with our co-workers, the sculptors and the decorators, on whom so much depends in the execution of our projects. Thus a precedent has been established in the right direction; the high standing of the profession has been fully recognized, and it is to be hoped that this step will inaugurate a new era in the employment of members of our profession.

When we consider how rarely, in this country, any time can be found for the serious consideration of art matters, we cannot fail to give unstinted praise to those who have directed this great undertaking in such a truly national spirit. Allusion is often made to the difficulties of our position, as compared with those of our confrères in Europe, who are surrounded by ancient examples of our art, and by an appreciative public, trained to admire the monumental glories of the past. On the other hand, our opportunities are far greater than theirs, owing to the rapid increase of our population, to the accumulation of large fortunes, to the great variety of building materials, to the excellency of our mechanics, etc.; besides which, the greatest freedom with us is allowed in design, uncontrolled as we are by precedents. Our individual responsibilities are also correspondingly greater, on account of the rapidity with which our work must be carried on, and the many new and complex problems daily presented for solution, such as high buildings, etc.

Just here a word about the extreme height of buildings in our cities. Although the owners of land may claim that they own from China below to the heavens above, yet it cannot be denied that an excessively high building is an injury to surrounding property and detrimental to public health, in the shutting out of the sun, light and air. Legislation will undoubtedly, at no distant day, regulate the height of buildings relatively to the width of the streets, as is the case in most of the European cities.

The difficulties and responsibilities of our profession are great indeed, and ever increasing, but our opportunity is likewise great and ever improving with the growing culture of our people. For centuries no fairer field has been offered for the display of true architectural talent; it only depends on the well-trained student to seize the opportunity. And permit me here to add, for the benefit more especially of the younger members, that eminence in our profession can alone be gained by a thorough study of the works of the past — there is no short road to glory; and I consider it as essential for the architectural student to thoroughly acquaint himself with classic architecture as it is for the literary man to be conversant with the classic authors.

But a short time has elapsed since a man of uncommon genius was taken from us. His vigorous works were universally admired, and he naturally had many followers; a large number but feeble imitators, others well grounded in classic architecture. On the latter alone can we depend for truly good work in the style of Richardson, who, it should be remembered, had a thorough classic training.

In conclusion I regret to state that congress still remains indifferent to the just appeal of Mr. Walter's family. That it has failed to pass the "Bill to establish a National Art Commission," and that in the architectural bureau of the treasury department, in Washington, are still prepared the designs of the public buildings of the nation.

These matters, more fully alluded to in a former address, together with others, such as the advisability of appealing to congress to

Architecture and the United States Government.*

BY JAMES H. WINDRIM, OF PHILADELPHIA.

THE Federal buildings erected by the government should characterize the best types of art in architecture. The public mind today is becoming educated. It is not satisfied with the mediocrity in art; the esthetic taste of our people is becoming more cultivated, the beautiful is more appreciated, and the demand is made for it. Good art is educational, refining, and should be enduring. It is proper that the Federal buildings should be of a high standard of artistic excellence, have the elements of proportion and study in design that will illustrate the strength and development of a successful people, and leave the impress of our advancement in art and culture as a nation.

The United States Government erects buildings for the use of the executive departments of the government; it also erects buildings in which it transacts the public business with the people—the custom-houses, postoffices and court-houses, located in every section of the country as the increase in population and development of business necessitates the government to provide for itself a building to accommodate the public offices, and in which the records of public business may be preserved.

These latter structures are erected when congress, by legislation, directs the Secretary of the Treasury to procure a site, and erect upon it a suitable building to accommodate the government offices for the transaction of public business then expressed, limiting the cost of the site and the building, complete in all its appointments, with approaches, to a fixed sum.

The officer under the Secretary of the Treasury to whom the duty of preparing the plans and specifications necessary to construct such buildings is assigned, is the supervising architect.

This officer is supposed to be the author of the plans and designs for the work thus placed under his care. Twenty-five years ago it was practical for an individual to comply with the duties of the office, but with each succeeding year the rapid increase in public business, with the development of the country, has added considerably to the labor and responsibility of this officer.

At this time there are probably forty odd buildings under construction and completion, and a number in excess of sixty new structures are awaiting to be designed by the supervising architect or his assistants. It is patent that the amount of labor thus involved cannot receive from one head careful consideration in the matters of arrangement of buildings and the details of construction, or receive the study and painstaking in design which should be given to the permanent buildings of the government.

While the routine business of the government is managed with exacting uniformity, and consequently there is uniformity in the requirements for the building, so that there appears to be a limit in the scope of the architect, there is choice in the adaptation of building to site, which invites variety in the form and exterior design of the structure.

The supervising architect's office has some most capable assistants, as much good work in the buildings of the government shows; but there are not enough capable employes for the amount of work devolving upon the office, and, under existing regulations, they are not obtainable.

The supervising architect experienced this fact, and considered it his duty, in the annual report of 1889, to recommend to the Secretary of the Treasury the advisability of securing the plans for the most important buildings for the government through the architects of the country by competition, and suggested a method that appeared practicable, for consideration; also, in his report of 1890, again requested attention to this important subject.

The Honorable Secretary of the Treasury, the late William Windom, became so far convinced of the possible benefit to the public service, if the method proposed was tried, that in his report to congress he indorses the recommendation on this subject, as follows: "The following recommendations of the supervising architect of this department are concurred in: That the system of competitive designs for public buildings be tried."

The supervising architect of the Treasury Department can only be what the designation of the office implies—a supervisor whose time is almost continuously occupied with the business management of the office and the solution of its business problems; he cannot be the architect of the many structures that are assigned to his care, and they are successful structures, as best adapted for the purposes for which they are erected, and have merit as artistic designs, largely dependent upon the skill and talent of his assistants.

The supervising architect, on February 7, 1891, suggested in a bill authorizing the erection of a proposed post-office and sub-treasury building in the city of Chicago a section providing that, at the discretion of the Secretary of the Treasury, the plans for the same be obtained by competition of architects; also, on February 20, 1891, the supervising architect forwarded a memorandum, containing a proposed amendment to the "legislative, executive and judicial appropriation bill," to the committee, as follows:

And the Secretary of the Treasury is hereby further authorized, in his discretion, to obtain plans, drawings and specifications for the erection of public buildings, through competitions, by architects, under such conditions as he may prescribe, and to make payment of the expenses of said architects' services out of the appropriations for the respective buildings.

Action, however, was not taken in either case by the committee of congress.

Such legislation passed would permit the Honorable Secretary of the Treasury to invite competition among architects for the plans and

designs for federal buildings, and by the adoption of the method the government would be assured of the personal supervision of the architect, who would have an individual responsibility for the fitness of the building and for its artistic excellence.

How is the public service to be benefited by the United States government engaging an architect for each important federal building? This practical side of the question is that which the business man in congress will ask in answer.

First. By the dispatch of business the practicing architect completes his work as a whole, in the earliest time practicable, and to do this can give undivided attention to the preparation of design and the study of detail. There is a fixed time when his work is finished. Against this is a lamentable fact that public business is conducted with much formality, but not with the directness of private business.

If the buildings erected by the government were conducted on business methods the same as the erection of like structures by individuals, it would be economy to the public service.

Second. The careful and continuous thought of an architect directed to one building must produce better results than the same thought disjointed in the effort to care for many buildings. By the selection of architects for merit in design the buildings erected by the government should represent the best examples of architectural art and the entire country would be benefited.

There is a limit to the amount of work one man can do, be he ever so capable. When the limit of capability is reached all business thereafter is not so well done, and should be deferred to another. The number of buildings which the government is continually erecting suggests the propriety of securing, by division of labor, new thought, energy and ability among the profession of architects. Such action would tend to secure the first—economy to the public service by dispatch of business, and the second—the undivided attention of an architect engaged for a specific duty, which would also result in economy.

The Antecedents of Gothic Architecture.*

BY PROF. CHARLES H. MOORE, OF HARVARD UNIVERSITY.

I SUPPOSE that while we all recognize the fact that architecture is something more than constructive building, we equally maintain that it is always based upon constructive principles, and that these constructive principles are what primarily determine the respective characters of architectural styles.

I conceive that in broadest classification there have existed in the world thus far but three fundamentally differentiated architectural systems—the trabeate, the inert arched, and the balanced. Or, to name them from their leading types, the Greek, the Roman, and the Gothic.

The numberless varieties of styles which have taken shape during the historic progress of the art are but so many modified forms of one or the other of these main groups.

By Gothic architecture I understand then, primarily, an architecture which is distinguished by a balanced system of construction. A system in which the side thrusts of vaults and arches are met by well adjusted props or braces, rather than by inert masonry. And it is clear that an architecture based on such a system admits of, and logically demands, a degree of slenderness in its supporting members which would be insecure in an architecture based on any other system. It follows that among the distinguishing characteristics of Gothic construction are comparative lightness of supports and consequent large extent of openings between them. Therefore, before we can properly call a building Gothic we must find these characteristics either developed or in process of development.

In the forming Gothic style the exigencies of the system were yet incompletely apprehended by the builders, and, consequently, the ultimate principles were not fully carried out. But in all transitional monuments rightly so-called, the animating spirit of the system may be seen to be working, and tending to modify structural forms in the Gothic direction.

The principal incipient forms are those of the vaulting, and it is not until these are considerably developed that the lower supports are wholly transformed and brought into agreement.

The principles which mainly governed the Gothic vault transformation are those of diminution and concentration of pressures. And it is, I think, because the exigencies of this last have not been fully recognized, that so much misunderstanding of Gothic art has prevailed. Our conceptions of Gothic have been so largely influenced by the belief that it is mainly characterized by the use of the pointed arch, that this more essential principle has been largely overlooked. It was this necessity for concentration of thrusts that first led to the use of groin-ribs (for the groins of ordinary cross-vaults do not need supports where their thrusts are amply met by strength of walls, or of massive piers), and it was this necessity which gave to Gothic vaulting that peculiar form which has puzzled so many students of architecture who have not primarily regarded structural principles in their examinations and classifications of styles. I refer to that twisted conformation of the lateral cells of the vault which results from the stiling of the longitudinal rib. It is by means of this elevation of the springing of the end-ribs of these lateral cells that the completest possible concentration of the vault thrusts against the narrow pier is effected, and the full efficiency of the flying buttress is secured. Now, I think I am justified in saying that this is the most fundamental peculiarity of Gothic building, for everything else that distinguishes the system results from it.

This balanced system being, then, what fundamentally distinguishes the Gothic style, let us now consider what were its antecedents

*Paper read before the Twenty-fifth Annual Convention of the American Institute of Architects, at Boston, Massachusetts, October 28, 1891.

*Paper read before the Twenty-Fifth Annual Convention of the American Institute of Architects, at Boston, Massachusetts, October 29, 1891.

-- what class of earlier buildings really contained the germs of Gothic. It is commonly said that the Gothic was developed out of the Romanesque, though this development has been largely regarded as ornamental; the transition has been traced by nearly all writers, from De Caumont to Sharpe, through moldings, pointed arches and other small features; while but a few writers -- I believe only Viollet-le-Duc and Quicherat -- have recognized that it is essentially structural. It is true that structurally the Gothic is an evolution out of the Romanesque. But the term Romanesque has, perhaps, the widest meaning of any that is used in connection with architecture. In utmost strictness, the Romanesque is not a style. It is an architecture of transition. Quicherat defines it as that which has ceased to be Roman, and has not yet become Gothic. With slight modification, this is a good definition. The modification that I should make would be to insert the word *strictly* before Roman, so that the definition would be: "Romanesque architecture is that which has ceased to be strictly Roman, and has not yet become Gothic." For the Romanesque is structurally Roman except in so far as it exhibits features that are tending toward Gothic.

To comprehensively designate this transitional architecture, the term Romanesque is a good one, for which it would be hard to find a substitute. But in connection with the origin of Gothic we need to discriminate. For when we look for the structural antecedents of Gothic, we find that some great classes of Romanesque buildings exhibit them so slightly and imperfectly that they can hardly be regarded as antecedents at all.

In general, what is known as basilical Romanesque -- buildings like the cathedral of Pisa -- had almost nothing to do with the structural evolution of the Gothic style. In its most general form the basilica does, of course foreshadow the Gothic. And as regards this general form, it may be considered as a prototype. But in its constructive system the basilica contained almost no element of growth. Its timber roof called for no system of supports such as could in any way suggest the organic Gothic system. It may, indeed, be said that some of the antecedents of Gothic reach back to those few Christian Roman monuments, in some parts of which a rudimentary functional grouping of supports occurs. The first and most important instance of such a grouping that I know of is that which appears in the so-called basilica of Maxentius in the Roman Forum. This building dates from the beginning of the fourth century, and it followed closely after the well-known arcade of the court of the Palace of Diocletian at Spalato. As that is the first known instance of the logical use of the arch in connection with the columns, so, I believe, this basilica of Maxentius exhibits the first instance of a groined vault springing from columns placed in front of the piers, unless the great hall of the Baths of Caracalla may have exhibited a similar arrangement at a preceding date.

It will be remembered that this system presents a pier carrying the main archivolt with a detached column, surmounted by a strip of entablature to carry the vaulting; something remotely foreshadowing the mediæval grouped support is thus to be noted as far back as this. But nothing appears to have grown out of this monument in the way of the development of an organic system of supports for vaulting. It was constructed toward the end of what may be called the period of Imperial Roman art, and the Christian Roman builders, as is well known, employed the timber-roofed basilica with the simplest forms of superposed colonades and arcades, having no organic connection with each other, and in no feature, except perhaps the pier of the eastern arch, which sometimes has a column in front of it, suggesting anything in the least like the Gothic forms. The coupling of shafts, as in some of the Roman circular buildings, like St. Constanza at Rome, has far less to do with the development of Gothic, for such grouping has no structural significance. Its columns have no relation respectively to different parts of the superstructure.

In the Roman buildings of central Syria an arrangement similar to that of the basilica of Maxentius occasionally occurs, though not in connection with vaulting. In the Church of Roueïha, dating from the sixth century, engaged piers, carrying transverse arches, are incorporated with the piers of the great arcade; and the same thing occurs in the piers of the apse of the Church of Tourmin, but the principle is not developed into a system; and it is always confined, as it is also in the basilica of Maxentius, to a single story. A very remote suggestion of a functional grouping of piers, extending over two stories of arcading, occurs in the supports of the central dome of the Church of St. Sophia at Constantinople. And it is not impossible that something like this, which is not uncommon in Byzantine design, may have given the initiative to the early mediæval builders.

The first true instances of grouped supports designed to carry vaulting, and embracing several stories, occur in the eleventh century churches of northern Italy, in the style known as the Lombard Romanesque. In this region the vigorous genius of the Lombard race had stimulated invention, and developed constructive ideas and methods which largely superseded those of former times. The Lombard constructive system, as exhibited in its most important monument, St. Michele of Pavia, was a radical innovation. The vaulting of the nave of this building was originally quadripartite in square compartments -- like that of the basilica of Maxentius. It was furnished with heavy transverse ribs of two orders, both of square section, and it presented the first known instance of the use of groin ribs and longitudinal ribs. The sustaining pier is compounded of as many members which rise from the pavement, and are crowned with a compound capital that furnishes a separate member for each vaulting-rib. The vault compartments of the aisles have but half the space of those of the nave, which necessitates the insertion of an intermediate pier. This pier has four engaged shafts, two of which carry the sub-orders of the archivolt (which are in two orders), one to carry the intermediate transverse rib of the aisle vault, and one on

the side of the nave which rises to the triforium string but carries nothing, and is the only member in the system which is not perfectly logical. The double archivolt of the main arcade are supported by square members and engaged shafts in both main and intermediate piers. The church has also a triforium gallery, with double archivolt and functional supports. The building shows a most remarkable advance on anything that we know of that had gone before it. Indeed the Gothic system is here very fully foreshadowed, though radical changes had to take place in the forms of the vaulting before it could be further developed.

This Lombard system was carried over the Alps into Germany and there in the twelfth century, crystallized, so to speak, into the magnificent Rhenish Romanesque, which, by maintaining the square vaulting compartment, precluded any structural growth.

It was the Lombard Romanesque, then, and its derivatives which contained the first distinct germs of the Gothic style. But these germs could not develop without congenial soil. The soil of northern Italy was not congenial. Here by the twelfth century inventive vigor was spent. The Lombard element had been absorbed, and the Italian genius began to reassert itself with all of its conservative tendencies. The Italian constructive traditions were fundamentally Roman, and hence the basilical idea was, in church building, largely reinstated; though some of the Lombard principles were, in some localities, often incorporated with it, though without any inventive results. The soil of Germany proved equally uncongenial. The German builders were slow in invention, and almost as conservative as the Italians of acquirements that suited their needs and tastes. But France was, in the eleventh and twelfth centuries, the region of the most active intellectual life that then existed anywhere in Europe. And it was the Romanesque of France, and of France only, that directly gave rise to the wonderful development known as Gothic architecture.

But the Romanesque in France assumed a variety of forms not all of which were found with the germs of Gothic. The French Romanesque is broadly of two classes which occupy respectively the two principal geographical divisions of the country -- the northern and the southern. The Romanesque of southern France is mainly characterized by the use of the barrel vault of either round or pointed section -- a form which did not suggest, and was not capable of, any further development. This form of vault was but a survival of the Imperial Roman system in a region which had maintained longer than any other, the ancient civilization and traditions. Buildings like St. Trophime, St. Gilles and Vaison, though magnificent in their way, were, as regards their vaulting, but a final efflorescence of an obsolete system. And although their builders adopted the Lombard grouped pier, variously modified, yet functionally adjusted to the arches and ribs with which their vaults were strengthened, they had not used these borrowed forms inventively; and in this class of monuments could, therefore, contribute nothing toward the development of a new art. Hence no new art arose in this region, or any other, as a result of their influence.

But in the north of France -- where ancient monuments had been fewer, ancient traditions less authoritative, and where the fusion of races had been more complete and better balanced -- imagination had been highly stimulated, and new constructive forms that were quick with potent energy began early to appear. The use of vaulting did not set in here as early as in the south. The northern Romanesque builders of the eleventh century usually covered their naves with timber roofs. But when repeated disasters from fire had demonstrated the necessity of resort to vaulting, the second groined form was invariably adopted, which, over the rectangular compartments that had prevailed in this region, led, in the hands of these energetic and ingenious people, to a series of experimental innovations which followed each other in rapid succession until the Gothic system was reached. There were here several centers of Romanesque inventive activity, each of which seems to have contributed something to the development of the chief school which soon became that of the Ile de France. These were mainly Burgundy on the one side, and Normandy on the other.

The Burgundian Romanesque is fully exemplified in the nave of the Abbey Church of Vezelay (twelfth century). It exhibits a modified application of the Lombard system to a building of narrow bays, giving rectangular instead of square vaulting compartments. This form is generally regarded as derived from the basilical type of buildings, but it seems to me that the intermediate pier of the Lombard type may naturally have suggested it. However that may be, the piers are all alike, and are composed of members having a perfectly functional adjustment to the vaults and arches. Though showing an advance on the vaults of St. Michele in being constructed over oblong compartments, these vaults of Vezelay are less advanced as regards their rib systems, for they are not provided with diagonal ribs. And it is interesting to note that the pier is correspondingly simplified, the member which in St. Michele carries the diagonal rib being omitted. But the system is perfectly logical as far as it goes. The vaults have heavy transverse ribs and wall ribs, the former being of two orders. The first order is carried by a broad pilaster starting from the pavement, while the sub-order rests on an engaged shaft, also rising from the pavement. The wall ribs are supported by short pilasters resting on the triforium ledge. The double archivolt of the lower arcade are sustained, as in St. Michele, on square members and engaged shafts. The triforium space is low, and without openings -- a simplification of the Lombard type that is common in the Rhenish as well as in the Burgundian Romanesque churches. This building, though constructed essentially on the Romanesque inert principle, nevertheless contains internally, as we see in rudimentary form, nearly all the constructive features of a Gothic edifice.

Some recent writers have supposed that the Cistercian order of monks were instrumental in developing and extending the early

Gothic system. The learned German writer Dehio, has lately published an essay on the "Beginnings of Gothic," in which he takes the Cistercian churches of Pontigny in Burgundy, and Fossanova in Italy, as types of transitional building, and as important monuments illustrating early Gothic developments. But neither of these buildings show the initial principles of the new style. And if they did it would not show that Cistercian influence had had much to do with the formation of Gothic; for these, as regards their Gothic features, are exceptional buildings, though in essential constructive principle they belong strictly to the Burgundian Romanesque category. The Cistercians had no consistent modes of building. They adopted different forms according to circumstances. In some cases, as at Hontrieve, employing the barrel vault; in others, as at Pontigny, imitating the features that had been developed in the Ile de France.

The typical Romanesque of Normandy is earlier than that of Burgundy, the existing Church of St. Stephens at Caen dating its foundations from the year 1066. It is a more direct copy, though much modified and simplified, of St. Michele of Pavia. Whether this building was originally designed for vaulting is not known; but it is certain that it was first completed with a timber roof. Its main piers are, however, compounded of members corresponding to those of the Lombard pier, and they are well adjusted to the vaulting with which the timber roof was replaced early in the twelfth century. This vaulting is of a form that had not before, so far as is known, been constructed. It is primarily a modification of the square groined vault resulting from the insertion of an intermediate transverse rib which subdivides the lateral cells, making the compartment sexpartite. Instead of converting the Lombard intermediate pier of the ground story into a complete pier precisely like the main piers—thus producing narrow, or rectangular vault-compartments, as at Vezelay—the builders of Caen merely prolonged the intermediate vaulting-shaft to support the intermediate rib. In all other respects the system conforms to that of St. Michele except in its proportions, which are much elongated in the manner that subsequently prevailed in the North.

The sexpartite vault system which apparently originated at Caen was immediately taken up and perfected by the early Gothic builders of the Ile de France; but it is not true, as is often affirmed, that it was exclusively used in early Gothic buildings. The vaults of Caen have a full system of ribs with exception of wall-ribs. As yet the Romanesque developments tending toward Gothic were mainly confined to the interior of the structure. But a first step in the direction of a corresponding external system was taken when pilaster-strips began to assume the form of projecting buttresses; and the germ of the true flying-buttress appears, I believe, for the first time in the arches that are thrown against the piers under the roof of the aisles on the sister church to St. Stephens—the Abbaye aux Dames at Caen.

The Romanesque of the Ile de France was almost all destroyed in the twelfth century by the active rebuilding in the new style which then prevailed. A few monuments of moderate dimensions remain, however, from which a general idea of it is obtained—Morienvall and St. Germain des Pres. The square compartment was generally abandoned and the rectangular form substituted. This was, I think, a circumstance of capital importance, giving rise, as it did, to difficulties in vaulting which quickened the inventive genius of the builders.

The Abbey Church of Morienvall is the most important existing monument as regards the direct antecedents of the Gothic style. It is a plain Romanesque building dating from the eleventh century with a reconstructed apse dating apparently from the end of that century. Here we get, on a very small scale, a rudimentary apsidal aisle of four compartments in whose vaults the groin rib occurs in connection with some very curious experiments in the use of the pointed arch. It is, I believe, the earliest monument in existence in which these two features are associated; and it was apparently the starting point of that series of experiments which led to the remarkable vaulting of the apse of St. Denio, and thence, through a most magnificent series of constructive innovations, to that most consummate product of human genius—the Cathedral of Amiens.

Comparative Architecture.*

A CONTRIBUTION TOWARD THE STUDY OF ARCHITECTURE.

BY BARR FERREE.

COMPARATIVE architecture bears the same relation to historical architecture or the history of architecture, as comparative ethnology does to the general ethnology, or comparative anatomy does to general anatomy. Architecture is not a science; its laws cannot be predicated, it has a personal element, the imagination of the artist or of the architect, which is absent in the true sciences. But it is a subject that may be treated both descriptively and historically, and it is, therefore, possible to treat it comparatively. Few methods of study have added so much to human knowledge as the comparative. We live in a comparative age. We have comparative zoölogy, geology, physiology and multitudes of kindred subjects that have opened new fields of culture, broadened knowledge, made us familiar with forms of life and natural laws which otherwise would have been neglected. Some of the most important results of recent learning have been achieved in comparative philology, and in every department that the comparative method has been applied to, fresh and important information and greater interest have been forthcoming.

Architecture is the least imaginative of the arts. It is concerned with practical questions, with materials, environment, climate,

geology, products of the earth, and many other circumstances which make it eminently useful as they take it away from the artistic. But while architecture is limited by these requirements it is impossible to look for a law of architecture whereby results may be predicated.

The possibilities of neither the historical nor the descriptive methods have been exhausted, but the comparative will help to a clearer understanding of our present knowledge and make future work more intelligible.

To suggest a definition, comparative architecture takes the facts of historical and descriptive architecture and describes the comparative progress made by all nations under every condition. It takes the substance of the art, its materials, the climate in which characteristic styles have developed, the national or governmental conditions under which they have flourished; the ethnographic relations of the people, the geological peculiarities of architectural districts, the distinctive social and mental qualities; notes the influence of the allied arts, of religion, temperature, use, civilization, constructive ability and methods, and every cause which in one way or another, to a greater or less extent, has operated in the production and formation of architecture in all times and ages. It is independent of a definition of architecture; it does not matter if climate, country, nationality and other conditions are considered an integral part of the definition of the word or art of architecture. No architecture of any kind is possible without these influences or causes, though their effect may not always be visible or visible to the same degree. It calls for no straining or definitions to make these things subjects of study, and they are, therefore, grouped under what for want of a better name I have called comparative architecture.

In a history of architecture composed on the old historical form, the author would arrange his subject in countries, and under each would, perhaps, note the effect of the various causes that have just been enumerated. The result would be a series of chapters in which the reader would have to begin at the beginning each time and note the influence of, for example, religion, materials, etc., in each country separately, without having a general idea of the actual manner in which materials, construction, religion, etc., have affected architecture as a whole.

In the comparative method, the chapters would not be headed with the names of countries, but with names of influences, as materials, construction, religion, and the effects of each would be noted in their varying degree in each country where architecture had flourished. No general view of the history of individual styles would be obtained by this means, such as the text books now offer us, but comparative architecture is intended to supplement present work and present methods, not to take their place. Architecture is shown as a natural art, evolved under natural conditions; not a succession of historical facts with disquisitions on dates and problematic conjectures, nor a combination of descriptions giving the number of doors, windows, columns and square inches of ornament in every building under the sun. Comparative architecture does not concern itself with the history and description of styles, but with reasons for their existence.

We live in an age of inquiry. It is not sufficient to state facts, it is necessary to give reasons why and reasons that all can understand. Historical students deem nothing too insignificant for the illumining of the events they describe, and the most microscopic researches have often returned the richest results. Similar researches into the history of architecture cannot have other than beneficial results. Under the treatment here proposed, architecture acquires a new meaning and purpose that it would never have had while viewed solely in the historical and descriptive manner. Styles, methods, results, variations are explained and their relationships. Reasons for the prevalence of certain forms under certain conditions are given, and the art appears no longer as the products of the imagination, the creation of fancy, but the outcome of natural, reasonable, sensible, useful and at the same time beautiful conditions of different natures originating under different conditions.

The more closely the reasons of architecture are examined, the less spontaneous it appears, the closer it approaches the domain of law, though without entering it. Ornament remains outside any such influence, and the personal element thoroughly prevents architecture from being regarded as a product of an evolution in the sense that a plant or an animal may be so regarded. But it is not entirely the result of personal whim, fancy, pleasure or imagination. The Assyrians did not build their immense vaults because they pleased them, but from the nature of their climate and the building materials at their hand. It is impossible to refer the production of a historical style to any one set of phenomena; it is not possible to get further than general groups, but, notwithstanding their uncertainty, they show architecture to be a living, progressive, reasoning art, reflecting the deeds and nature of man with a fidelity surpassed by few records.

The influence the comparative method may have in extending popular interest in architecture is not the least important of its elements. The dull record of historical sequences, the detailed examination of styles and their characteristics, the warfares over nomenclatures, the strict chronological chronicling of buildings in all times and ages, will never give the animation to architectural study it so sadly and obviously needs. There is no greater evil in architectural study than isolation. Architectural students forget the coördinate relations of their art in its beauty and artistic merit. No just estimate of all the works of men can be possible which does not take into account their buildings, even though their esthetic value is neglected. Yet historians of architecture do not hesitate to prepare essays in which the great historical events that have rendered the subjects of their discussions possible are ignored or scarcely referred to. A building is a thought, an idea, an intellectual product, and must be treated as such in every intelligent study. Viewed alone, the greatest

* Abstract of a paper read before the Twenty-fifth Convention of the American Institute of Architects, at Boston, Massachusetts, October 29, 1891.

monuments are deprived of much of their value. The Parthenon, Notre Dame and other great buildings typify ages and intellectual movements, as well as developments in construction and epochs in styles. It is not enough to describe them apart from their environment, nor can the men who built them, and their intellectual and historical positions, be passed over in a few words. It may seem formidable to say that the history of architecture is the history of humanity, and that one cannot be understood without the other; but is it well to continue in present lines if they are not sound, or if they do not rest on firm foundations?

Architecture, both as an art and as the science of construction, suffers from a lack of popular interest. It is not popular as china painting, decorative upholstery and other alleged arts are, and both painting and sculpture surpass it in general estimation and interest. It is not exaggeration to attribute much of this indifference to the dull, prosing way in which writers on architecture have presented their subject. I am not without hope that the comparative method, when properly handled by competent hands, may introduce a change for the better. Clearly, if architecture is to become popular, some new method must be adopted for its general treatment. People take an immense interest in many dull and far-away subjects. Lectures on psychology, political economy, even Hebrew and Assyrian, are crowded with eager and appreciative audiences. Architecture is surely in more intimate touch with the masses than any of these. If the fault is not in the subject, it must be in the methods.

Architecture is now almost the only form of knowledge that is not treated in a scientific manner, and viewed as a reasonable product of reasoning minds. The comparative study of monuments now forms the basis of the best work of the most advanced archæologists. But their method is, perhaps, better to be called analytical than comparative, but in no case does it go far enough. If important events can be ascertained by the analytical studies of coördinate groups of buildings it should not be less valuable, or productive of less instructive and interesting results, to apply the same method to buildings which are not so intimately related. All buildings are products of a human intellect, and in a certain sense they all have the same end, that of fulfilling some of men's necessities. Architecture is eagerly seized as a subject of study when there is absolutely nothing else to learn of departed races, but when it is one of many forms of remains of past civilization it is viewed as an esthetic art without due appreciation of its proper uses.

Modern architecture, as well as ancient, is a proper subject for comparative treatment. Architecture is limited by circumstances and conditions today as in the past; they are not the same conditions, nor do they have the same results, but they still form legitimate subjects of study in the manner here proposed.

Architectural Education.*

YOUR committee to whom was referred D. Cady Staley's communication of Nov. 24, 1890, soliciting your coöperation in establishing a course of instruction in architecture at the Case School of Applied Science in this city, begs leave to submit its report.

As is already known, the communication with a proposed course of study enclosed was received and informally discussed at our regular December meeting, and then referred to this committee with instructions to compile all the information available, together with the suggestions growing out of the discussion, and report it at this meeting for further discussion.

Pending our previous discussion it was agreed that any endeavor looking toward the establishment of a thorough course in architecture would meet with our hearty coöperation and encouragement. While so much seemed perfectly clear, yet the question of ways, means, methods, responsibility, ultimate success and other details were so complex and infinite that there was much need for reflection, before we as a Chapter could act intelligently upon the recommendation as to the best course of study to pursue.

In looking over the field of the various contemporaneous professions and examining the educational advantages given them before they enter upon their lifework, we are forced to confess that our own profession lacks much to be wished for.

To many who are treading along our path it still may be an open question, whether after all it is not best for a man to ally himself in his youth with a skillful architect, and grow up with the office, rather than to take a preliminary technical course, which, under certain conditions, produces theorizers rather than practitioners.

While there are many successful architects who are of office growth, yet it cannot be denied that there are also a goodly number who owe their success to having been able to attend one of the architectural schools, particularly one of those of Continental Europe.

In pointing out a proper course of study for any student, there is no fixing of standards for an exceptional genius, — such a one, even when left to circumstance, through an inborn intuition by self culture will acquire a thorough command of his profession and will succeed when the average man would fail. It is then with the average man that we will have to deal. Starting two such men in life, equally endowed as to their fitness and adaptability, the one who is taught in early life, in a logical, systematic manner, to classify his knowledge, thought and action, with their fullest bearing upon the practical problems he is expected to deal with, will make the most successful man.

To grow up in an office without any previous preliminary training as to the classification of the facts presented in its daily routine, no

doubt, in time, leads to the absorption of much useful knowledge, but when the time comes for independent action or research, too much is left to chance to get out of the responsibilities involved in the best possible manner.

While to grow up in a school, acquiring only speculations and theories without their practical adaptation to the problems of life, equally unfits a man for independent action, such a one often finds his hardest task to learn that life is too short for the application of his hair-splitting theories, and which often are even not wanted.

It is only through the happy medium of both theory and practice, acquired side by side, that the best and most satisfactory results are and can be obtained—cultivated alike of a thinking head and a cunning hand, brings the self-confidence which retains success when once acquired, either spontaneously or by slower growth.

In the training of a student to one of the professions practicing the useful arts, its success does not depend so much upon the student as upon his instructors. Such training should be in the hands of practitioners duly qualified to practice what they preach — men who, if need be, can carry their speculative researches to the utmost limits of the scientific principles involved, and after they have matured their conclusions or designs can instruct the artisan, in an intelligent way, how to construct or produce them to do the duty expected.

In their evolution of knowledge, they should be able to point out to the student the successive steps in a clear, logical manner, with an enthusiasm not fanatical but impressively irresistible — their hearts should be in it and the spirit of truth should always guide them. Their duty should be a pleasure and not a task to be dismissed with an indifference, the sooner gotten rid of and salary drawn the better.

In pointing out life it should be taken as it is, including its shortcomings, errors and faults, and not picture it an Utopia free from sin and guilt.

Under such a system it does not matter what or how much of a profession is taught; the student cannot but help to learn how to think, and to think in the right direction, too; the classification of knowledge will be indelibly impressed and the method of research properly instilled.

Thus prepared the neophyte enters the practice of his profession with his line of duty marked out along the path of inspiration, hope and reward, and not to the doom of disappointment.

Upon a closer examination we find that the elements and principles of any science are few but fundamental, easily acquired if properly instilled. That they should and must be properly acquired at the outset to achieve success, grows from the fact that it is the combination of these elements and principles which go to make up the complexity of the infinite number of problems with which a profession has to deal.

To particularize in regard to our own profession, of all professions the most complex in its demands, what can be done to bring about a course of training which, within a limited space of time, will result in the best fitting of a young man to enter its practice with a reasonable expectation of ultimate success? What shall be taught? What shall not be taught? What are the elements and principles which underlie the conglomerate mass of almost universal information required to be possessed by the successful architect.

First of all, how shall we train the hand that it may find ready expression in that universal language, drawing? In guiding the eye, how shall we stimulate observation so that it may see the minutest detail at a glance? And, along with the cultivation of the mind, how shall we quicken the imagination into inventive activity — blend it with the observations of past experiences, so that new and useful conventionalities may result?

How shall we control crude thought to a proper appreciation of the esthetic, the true, the beautiful and the good, so that the conventionalities of its creation when called into existence by description, art may be consistent in modeling and coloring? How shall we acquire a conduct to be ethical at all times, under all circumstances?

Giving our questions a more practical turn, how well should a student be taught to know the materials he is expected to work into consistent shapes? How much of their chemical and physical properties should be known, inclusive of the laws which govern their existence, durability and their statical relations? Then again, there are certain other laws, such as those of acoustics, light, heat, electricity, ventilation, sanitary science, as well as those of the business of commerce — can they be overlooked?

How much has tradition and history done for him, and what monuments should be studied in detail, as if erected for his special honor? Should any topics of general culture be pursued for the sake of discipline at the sacrifice of more essential professional ones, or should such topics be merely touched upon and then relegated to self-culture at the student's option when better favored with time? What proportion of the allotted time should be spent in the lecture or recitation room, in the drawing room or modeling room or workshop?

These are a few of the questions which confronted your committee at the outset — a veritable chaos! In order to see what was being done to solve them in other quarters, your committee obtained the curriculum of the course of study in architecture from several of the leading institutions in this country.

By inter-comparison among themselves and with those of some of the representative schools of continental Europe, your committee finds that most of the courses of our own technical schools are too much influenced either by the engineering features, or some other special characteristic of the institution, while in the courses of the European schools every essential branch seems to be made subservient to its professional end. There, the instruction is in the hands of a large corps of practicing professional specialists; while in our own schools the number of instructors is generally so small that in trying

*The Cleveland Chapter of the American Institute of Architects presented this paper, which was a report of one of its committees. Read by John Eisenmann, of Cleveland, before the Twenty-fifth Annual Convention of the American Institute of Architects at Boston, October 29, 1891.

to cover the ground their lives are held too close to the pedagogical rack, so that but a very few attain a very high standing in the profession or do justice to themselves as practitioners.

Abroad, the student comes in daily contact with some of the best men who are designing buildings and living in the world, and thus keep pace with the progress of the day. The instruction received is obtained from lectures founded upon the individual experience and practice of a specialist, hence the information received is never obsolete from having been gained from text books, or compiled from the recorded experience of others with an unpracticed hand.

When all information is given or obtained from text books, anyone endowed with the faculty of compilation and of teaching what he has read can be an instructor; but of what value except encyclopedia is such instruction to the student, if its practical application is not thoroughly understood? No wonder so many embryo architects prefer the method of office training instead.

Very few of our institutions lay that stress upon freehand drawing or modeling which is required in the European schools. In a general way, there, at least thirty-three per cent, and in some cases as high as forty per cent of the whole allotted time of the course is taken up with freehand drawing and modeling, the time being nearly equally divided between them. As for the other division of time, from sixty to sixty-five per cent of the remainder is taken up in the architectural drawing room, and the balance devoted to topics of the lecture room, inclusive of incidental field work, shop practice and laboratory work.

Compare the above divisions of time with that of our best standards, and you will find a marked difference, although some more nearly approach it than others.

In most of them, instead of a judicious assignment of the time to essential branches only, much of it is taken up by sandwiching in foreign topics to fill up or pad out the course, so that when the engineering features predominate, architectural superintendents rather than architects is the result; and when they are entirely omitted, draftsmen, not architects, are produced.

There is a happy blending of all the essentials which would produce just as good results as may be conceded to the European schools. The students' minds we have to deal with are just as bright and of as high an order if not broader, as they are there, and that the result of the training is not as satisfactory is the fault of the methods and teaching. Ask any practitioner who has enjoyed the advantages of a foreign architectural school how many of his professors had an almost international reputation in the specialties they taught him, and you will be surprised at the result. Can men of such professional reputation be induced to give part of their time to similar institutions in our own land? Why not? For until it is done such schools will never enjoy the distinctively high grade of an Ecole des Beaux Arts of Paris or the Bau Akademie of Berlin or the Polytechnicums of Munich, Brunswick, Stuttgart, Carlsruhe or Vienna.

Should the further coöperation of our Chapter be solicited toward the establishment of such a school in our midst, it is the opinion of your committee that we should do so along lines which will result in the best architectural training in its highest sense or not undertake it at all. With this in view your committee respectfully recommends the following, assuming that the training as outlined would extend over a four years' course.

First of all it believes that proper observation as well as self-confidence in the hand can only be obtained by a comprehensive course in freehand drawing from objects, not plates; plates should only be used to show results of methods and technique.

This course should extend over two whole afternoons each week and year of the four years in a progressive series. And for a training toward a further conception and the proportioning of forms, modeling should have at least one whole afternoon each week of the four years. The study of ornament, color and decoration should accompany the aforesaid studies. The purely mechanical architectural drawing required by the study of detail, composition and design should extend through two whole afternoons of each week throughout the course.

A knowledge of the use of instruments and of simple geometrical drawing, along with a manual training, should be among the requirements of admission, assuming graduates of scientific high schools as the established basis of admission.

Should a manual training be lacking in a student his time should be so allotted that he can make it up during his vacation, either at the school or in some workshop.

Descriptive geometry and simple building forms and details should begin at once after entering, and lead step by step through the intricacies of graphical applied mechanics, building construction, framing, and the stability of structures in a progressive series to the end of the third year.

Lectures on art should start in the first year, followed by the laws of art, esthetics, ethics, and the history of architecture and kindred subjects, in a four-year series.

Building materials of all kinds to be taken up in the second year of the course; the working strength, application and chemical and physical characteristics should be given, side by side, in a course of lectures and laboratory practice.

In the purely mathematical branches, none should be taught as exhaustively as for engineering students. Algebra, geometry and trigonometry should be treated as in a review only, and then analytical geometry taken and all completed by the end of the first year. Differential and integral calculus need only be touched upon to acquire the principles, so that with theoretical mechanics all the purely mathematical studies will be completed by the end of the second year.

Chemistry and physics need only be treated elementary, and if laboratory practice is required it should be upon building material exclusively, and both end with the second year. The subjects of

acoustics, heat, light, ventilation and electricity being in a separate course.

Some knowledge of French and German should be required on entering, but during the course of study it is to be left to the student's option as an extra study, but if at all taken up the time should be devoted to the technical literature of the languages.

The entering student should be given a rigid examination in the English language in order that no further time be lost in the study as ordinarily pursued in higher educational institutions, but instead the study of forms and expressions of specifications, contracts and business law, should take its place.

The use of surveying instruments should be compulsory as well as a knowledge of topography, earthwork and road making.

The modern science of sanitary draining, plumbing, steam, water and gas supply, should accompany the study of light, heat and ventilation.

A thorough course of lectures on building machinery should be given, inclusive of those used for transportation, reduction and manufacturing of material, as well as those employed about a building during erection or its finished state. Only the most essential of these need be in detail.

In the development of the study of design a thorough study of details should first be made before the composition of a "castle in the air" is attempted. It should be remembered that in our day the opportunity of designing in a purely monumental sense comes perhaps but once in a lifetime, and then even not without counting the cost or of trying to get the best result in the most economical way. After this study of detail, composition should follow, and the student's imagination and inventiveness allowed the utmost latitude, within the limits of conditions such as actually exist today rather than *yesterday*. When a design is completed the working drawings, specifications, bill of quantities, and estimates should be made out.

During vacation, time may be advantageously employed in sketching, observation tours, or on work either in the shop, office or scaffold. Such a course as outlined above, if properly instilled or taught, will produce just as good a result as that of any European standard. Although the details are not given it is surprising how much valuable ground may be covered in a four years' course, and yet leave something to work for in the future.

It was the intention of your committee to submit for your consideration the above course as outlined in such detail as would show the number of hours it would recommend to be devoted to each study, but the lack of time precluded its being done. Should this report meet with your approval, and if your committee is continued, it would be pleased to submit such a detailed course properly arranged at some future meeting.

Protection of Residences.*

BY FREDERICK BAUMANN, ARCHITECT.

THE air we breathe and which, for this reason, constitutes part of our body, is never pure. In the midst of cities it is full of dust, smoke and a score of minor impurities. In the open country it generally becomes purer with the distance from densely populated spots, and the purest air is found on the summit of mountains and in remote woodlands.

Pure air, this loose compound of oxygen and hydrogen, is constantly impregnated, not merely with extraneous substances above referred to, but also with traces of all elements and natural compounds in proportion to their relative volatility. Accordingly we find in it carbonic acid in measurable quantities; ammonia, nitrous acid and even some metallic acids in traces. Arsenious acids, for instance, are always present in the vicinity of arsenious products, so that miners and workmen especially are injured by inhaling the air thus contaminated. A similar fate, as we know, is in store for workmen in the quicksilver mines, and in the manufactories of white lead.

Various odors will penetrate the air in immeasurably small quantities. It is altogether impossible to measure the substances, by weight or otherwise, which signify their presence by odors, though ever so penetrating, such as, for instance, asafoetida or musk.

With every draft of air, therefore, we not only take in all substances therein suspended which are perceptible to our senses or by our instruments; we also take in immeasurably small quantities of all other elements and compounds in existence. Hence the mysterious compound of our blood, so wonderfully complex.

But the air is not merely a composite of all inorganic substances. The dust therein suspended is full of organic life, life struggling for existence, were it at the expense of the life of higher beings.

The whole philosophy of medical science has of late been subverted through the gradual discovery of the extensive species of minute beings called bacteria, the lowest order of beings known to exist. They were at once believed to be the product of a generation *aequivoca* — of spontaneous generation — until it was made evident by Pasteur that they are generated *ex ovo* — from the egg. Philosophers have, however, then subsequently — not abandoned faith in spontaneous generation from the original elements upward — but have put the bacteria up as a rather composite race of beings, made up from many millions of molecules, and established a belief in a class of organic beings as progenitors, as it were, of the bacteria, which beings are to be many times simpler composed and smaller than are the latter, and so minute in size that they will forever be hidden from human sight.

The microscope, so wonderfully improved in these days, has been instrumental in the discovery of many species of the bacteria family,

* A paper delivered before the American Institute of Architects at Boston, in October, 1897.

to which special names were given, as though they were positively distinct from each other. The latest science, however, seems to discover that the family has but really one or a limited number of species, the members of which are changing from one form into another; an opinion which was early propagated by Professor Naegeli at Munich, but contradicted by other philosophers.

All diseases and ailments of the human system are, according to an overwhelmingly large number of medical philosophers, owing to encroachments thereon by bacteria, as destroyers of blood and tissues. Quite a number of these bacteria have been minutely measured. The modern microscope has given the diameter of a microbe, so called, at one 20,000th of an inch, and its length at ten times that. Accordingly, a cubic inch of space could contain 800,000 millions of them, while the size of the average blood corpuscle, at one 3,500th of an inch in diameter, by twice this for its length, would yield 20,000 millions of them, and that of a grain of sundust of an average diameter of one 1,000th of an inch, 1,000 millions thereof to the cubic inch. Taking this size of the sundust as a unit, the size of a blood corpuscle is to be expressed by one 20th, and that of our microbe at one 800th of such unit. And the microbe assumed is by no means one of the smallest. It is merely one of those which have been measured, while hundreds of them, perhaps ten to fifty times inferior in size, have not been accurately noticed under the spectre of a microscope. No scientist, as yet, has distinctly seen the microbe which is considered to be the cause of the scourge which made its first appearance in 1498 with the French soldiers in Italy. Its original absolute incurability, however, was mitigated in the course of time. Men became gradually inoculated by inheritance with traces of the microbic poison, so as to be in a degree protected, and it is expected by scientists that in time the evil will entirely cease. Interesting it is that this evil has become a factor in the civilization of new countries, inasmuch as it tends to eradicate the original inhabitants, which are not from progeniture inoculated, and not subject, otherwise, to civilization. Added to this comes the inevitable whisky, so that two evils combined are found to be, in a sense, factors, very active factors, of civilization as it proceeds in new countries.

The microbe, or what else it may be called, of the scourge of small-pox has lost its power over man through the timely inoculation of the cow-pox virus into the human blood. It has been made evident by Pasteur that this cow-pox virus is coincident with small-pox virus, merely many a thousandfold attenuated. Hence the consequent efforts of this scientist as to a protection of human blood in a similar manner against the encroachment of microbes which are the cause of a number of infectious diseases.

Some twenty-five years ago Professor Naegeli mentioned some very interesting and, as I believe, important experiments as to the life of the lowest orders of fungi, of which our bacteria are the lowest yet. He prepared a proper neutral nourishing fluid, and put therein the seeds of mold fungi, fermenting fungi and bacteria. The result was that the latter exclusively went on to multiply at the expense of the nourishing fluid, so that not a trace of the other two kinds of fungi could be found. He then added one per cent of tartaric acid to a fresh dish of nourishing fluid. The result now was that the fermenting fungi had the field for themselves exclusively. A third experiment, with five per cent of the acid added to the fluid, gave the field to the mold fungi. Singly each kind of fungi would grow in either kind of nourishing fluid, but in competition with each other the field was conquered by one kind exclusively.

Arguing from this fact, Naegeli justly asserts that the blood corpuscles, as principals within their nourishing fluid, ever prevent the growth therein of other fungi, which are constantly inhaled with the air, thus coming in direct contact with the blood of the lungs. The blood corpuscles ever do this so far as they are in sound condition. But, alas, they are often weak and often subject to debilitating effects, so that the foreign fungi get a chance to grow and multiply, so rapidly indeed—doubling their number within every few minutes—that within a few hours the blood's life, and therewith the life of the being, may be destroyed.

Within the child there flows and grows the blood of its parents, and all the latter's ills and ailments that human flesh is heir of accompany the child. The German student expresses this in the jocular statement that every man "should be most careful in the selection of his parents."

A birth-place of bacteria is below the ground, nearest the level of ground-water. As the water recedes, the fungi get dry, and slowly rise with the ascending air current to the surface and into the atmosphere, there to be, by chance, inhaled.

Assuming a grain of fine sand to be one 200th of an inch in diameter, the number of grains per cubic is 8,000,000; further, assuming the interstices between grains at one-fourth, we may safely count 32,000,000 of interstices as taking up the entire space of a cubic inch. A single interstice may thus contain:

Thirty grains of sundust = 600 blood corpuscles = 24,000 microbes
A single microbe, of medium size, may, therefore, very conveniently ascend within a body of even the finest sand, within the pores of rock, of brick, mortar and concrete. It finds no sort of impediment in any dry substance excepting dense clay, so far as it is not wholly dry.

Such clay protects, as is substantiated by the following account of Doctor Pohl: A country gentleman had on his estate seven one-story houses inhabited by laborers. These houses were dilapidated and dirty. Their floors were a sort of concrete, made of clay. The houses were doomed to be destroyed, to make room for commodious tenements of the better class. At a time when cholera visited the place, five of the houses had been new, with floors raised from the ground, which had been deprived of the layer of clay; two were in previous condition. The disease laid up eighteen of the inmates of the new and improved, ostensibly far more sanitary houses, and none at all of

the two rotten and dirty houses. The result could only be attributed to the fact that the clay floors had effectually prevented any preparatory disease germs to rise within those houses.

I have at last arrived at my task proper. Bacteria are at all hours generated in the soil under our very homes, they rise, and are inhaled by us as the inmates. Among them there may at any time be some of the kind which cause disease, which might or might not grow at the expense of our blood, as circumstances beyond human control would govern.

The upward current, which brings them to us, is augmented in winter, as we well know, by the reverse of temperatures. Where human well-being and life are considered worth anything, there the architect of the present day should, without fail, pay due attention to such construction of a residence building as would fairly warrant a protection against all ascending air currents ever present under its floors and in its walls. The task is neither difficult nor expensive, as we shall see, and no excuse can effectively be offered on this score.

Common materials most likely to be proof against penetration of microbes are: Asphaltum, glass and pitch-tar. The asphaltum to be had in form of pressed plates. All these materials can be most readily had and employed.

Asphaltum or glass, in two layers, on proper mortar, to be put in all walls at the level of lowest floor. Asphaltum also to be put against exterior walls, terminating below lower water-table.

Concrete, with level surface, established on the entire ground, to be covered with a coat of pitch-tar and tarred felting, which may be repeated once or twice, to be lastly covered with a proper layer of finish-concrete. Where wooden floors are required, the finish-concrete may contain the required sleepers.

Where desired, a further protection can be had by spreading a sheet of lead under the furnace-stand prior to making the last concrete. Even the entire surface of basement may thus be advantageously covered, where expense is no objection.

These arrangements, carefully executed, are unquestionably calculated to produce the nearest positive impregnability of floor and walls of a house, though we must conceive it as next to impossible to give absolute evidence as to such effect. We must rest our assurances on the degree of impregnability of the substances employed and on the accurate manner of their employment.

The arrangement excludes the use of iron sewers and requires all water-supply pipes to be suspended from the basement ceiling. Return-pipes of a steam-heater, and cold-air ducts, must likewise be thus suspended. Iron sewer pipes are objectionable for several reasons. Iron is a bad material to be put underground. It decays. The decay is augmented by the acids of the liquids within the pipes, and the flow is impeded by rust. Arrangements for cleansing are, therefore, provided at short intervals. Earthen sewers, on the other hand, if well made, are of the most enduring material within our mechanical province, and should not be rejected because they are generally so bunglingly applied by our mechanics. Good sewerage requires the excavation of all trenches at one time, and a concave concrete foundation on a gradual and even pitch for all sewers. The sections should be laid in mortar of Portland cement, and connected by means of metallic rings, which will insure permanency. The receiving ends should be fully turned up, and have a socket in which is fitted an iron member receiving the soil or the waste-pipe, both being provided with a tight slip-joint. The joints within the socket to be tightened with a mixture of asphaltum and sulphur.

Provisions thus properly made, with due care and foresight, are unquestionably calculated to secure residence buildings in a desirable measure against the encroachment of those invisible beings which are the ever present and most persistent enemies of the human race.

Romanesque Windows.

IN all periods of Romanesque we find occasionally two or more arched openings comprised under one inclosing arch. This arrangement is more frequent in belfry windows and triforium openings than elsewhere, but occurs in ordinary windows, especially in secular buildings. The space intervening between the large arch and the two or more placed below it was, even as early as this, occasionally pierced with circles or other forms of opening. Here, then, we have the elements of the mullioned window before even the introduction of the pointed arch. In the same situations it gradually developed itself, step by step, during the Early Pointed period, so that we have in triforium arcades and in other positions a pretty full development of what is called plate tracery, before its use became frequent for ordinary windows. The case was pretty much the same both in France and England, though, on the whole, the love of placing two openings under one arch was greater in France; thus we see in the aisles at Chartres two plain lights under one arch, with a circular opening, and above, in the clearstory, a very large circle with somewhat complex subordinate piercings. The same is the case at Bourges, where three lights are often comprised under one arch, with a single circle in the head. The next great element which aided in producing tracery windows was the wheel, or other richly-pierced circular window. This, again, originated under the Romanesque style, as we may see at Barfreton and elsewhere. It is, in fact, a very close approach to tracery, and when placed in the space between comprising and comprising arches, it almost completes the change. All that is wanted is the piercing of the intervening spaces in forms whose outlines are parallel to the main piercings, so as to form what Professor Willis calls bar tracery. It is somewhat remarkable, as Mr. Ferree points out, that the French should have made the window over the doorway the most important one in their churches, while the English have made that over the high altar, which had frequently a sculptured rearedos.

Proceedings of the Twenty-fifth Annual Convention of the American Institute of Architects.

THE twenty-fifth annual convention of the American Institute of Architects was called to order October 28, 1891, at 10 o'clock A.M., in the new public library building, Boston, Massachusetts, Richard M. Hunt, of New York, president, in the chair; Dankmar Adler, of Chicago, secretary.

On motion, the calling of the roll and reading of the minutes was dispensed with.

The following were in attendance upon the convention. Dankmar Adler, Chicago, Ill.; W. W. Carlin, Buffalo, N. Y.; Frederick H. Gouge, Utica, N. Y.; Levi T. Scofield, Cleveland, Ohio; Otto Block, Rochester, N. Y.; W. M. Poindexter, Washington, D. C.; E. F. Fassett, Portland, Me.; Warren R. Briggs, Bridgeport, Conn.; James F. Alexander, Lafayette, Ind.; Samuel A. Treat, Chicago, Ill.; J. W. Richardson, Cleveland, Ohio; F. A. Coburn, Cleveland, Ohio; James G. Cutler, Rochester, N. Y.; S. V. Shipman, Chicago, Ill.; John H. Coxhead, St. Paul, Minn.; Louis Boucherle, Youngstown, Ohio; Stanford White, New York, N. Y.; James Murphy, Providence, R. I.; Jeremiah O'Rourke, Newark, N. J.; Charles K. Ramsey, St. Louis, Mo.; E. O. Fallis, Toledo, Ohio; J. M. Freese, Columbus, Ohio; John C. Smith, Orange, N. J.; Augustus Eichhorn, Orange, N. J.; George C. Mason, Jr., Philadelphia, Pa.; John Scott, Detroit, Mich.; A. J. Bloor, New York; John Eisenmann, Cleveland, Ohio; George H. Smith, Cleveland, Ohio; C. A. Wallingford, Saint Paul, Minn.; W. L. Plack, Philadelphia, Pa.; C. E. Illsley, St. Louis, Mo.; R. C. McLean, editor *INLAND ARCHITECT*, Chicago, Ill.; Otis Dockstader, Elmira, N. Y.; Henry C. Meyer, editor *Engineering Record*, New York, N. Y.; P. P. Furbur, St. Louis, Mo.; Theo. C. Link, St. Louis, Mo.; W. L. B. Jenney, Chicago, Ill.; Julian Barnes, Joliet, Ill.; John Calvin Stevens, Portland, Me.; Henry Van Brunt, Kansas City, Mo.; James W. McLaughlin, Cincinnati, Ohio; Adolph Cluss, Washington, D. C.; A. P. Cutting, Worcester, Mass.; E. Boyden, Worcester, Mass.; C. J. Clark, Louisville, Ky.; T. J. Lacey, Binghamton, N. Y.; S. M. Patton, Chattanooga, Tenn.; Joseph Blaby, Palmyra, N. Y.; Glenn Brown, Washington, D. C.; Stephen C. Earle, Worcester, Mass.; Lonsdale Green, Anniston, Ala.; John W. Ball, Cincinnati, Ohio; Franklin J. Sawtelle, Providence, R. I.; E. S. Walter, Scranton, Pa.; H. J. Hardenbergh, New York, N. Y.; Amos J. Boyden, Philadelphia, Pa.; Edwin J. Lewis, Jr., Boston, Mass.; Herbert Jacques, Boston, Mass.; Gustave W. Drach, Cincinnati, Ohio; George W. Kramer, Akron, Ohio; Samuel Hannaford, Cincinnati, Ohio; J. W. Yost, Columbus, Ohio; R. H. Hunt, New York, N. Y.; J. Appleton Wilson, Baltimore, Md.; Thomas J. Small, Providence, R. I.; Arthur G. Everett, Boston, Mass.; F. W. Angell, Providence, R. I.; James H. Windrim, Philadelphia, Pa.; Guy Tilden, Canton, Ohio; George W. Rapp, Cincinnati, Ohio; John A. Fox, Boston, Mass.; H. Langford Warren, Boston, Mass.; Alfred Stone, Providence, R. I.; Edward H. Kendall, New York, N. Y.; George B. Ferry, Milwaukee, Wis.; W. G. Preston, Boston, Mass.; A. W. Longfellow, Boston, Mass.; Richard M. Hunt, New York, N. Y.; Robert S. Peabody, Boston, Mass.; L. W. Robinson, New Haven, Conn.; George W. Cady, Providence, R. I.; John B. Wordsworth, Worcester, Mass.; Henry B. Ingram, representing *Architecture and Building*, New York, N. Y.; F. A. Wright, New York, N. Y.; M. J. Dimmock, Richmond, Va.; William S. Wicks, Buffalo, N. Y.; James T. Kelley, Boston, Mass.; William Cummings Richardson, Boston, Mass.; A. F. Rosenheim, St. Louis, Mo.; William B. Ittner, St. Louis, Mo.; S. C. Bulkley, St. Louis, Mo.; W. H. Foster, St. Louis, Mo.; Jacob Agne, Jr., Utica, N. Y.; H. W. Hartwell, Boston, Mass.; B. T. Lacey, Binghamton, N. Y.; Edward I. Nickerson, Providence, R. I.; W. B. Power, Philadelphia, Pa.; Samuel Ruckel, Jr., Philadelphia, Pa.; Edward Hazelhurst, Philadelphia, Pa.; R. M. Upjohn, New York, N. Y.; J. H. Pierce, Elmira, N. Y.; Frederick Baumann, Chicago, Ill.; F. G. Corser, Minneapolis, Minn.; Edwin C. Cabot, Boston, Mass.; W. P. P. Longfellow, Boston, Mass.; C. F. McKim, New York, N. Y.; C. E. Carpenter, Providence, R. I.; Charles A. Cummings, Boston, Mass.; William Roche Wave, editor *American Architect*, Boston, Mass.

Among the ladies present were Mrs. J. W. McLaughlin, Mrs. John Scott, Mrs. Julian Barnes, Mrs. W. M. Poindexter, Mrs. Warren R. Briggs, Mrs. J. N. Richardson, Mrs. John H. Coxhead, Mrs. Gustave W. Drach, Mrs. G. W. Kramer, Mrs. Samuel Hannaford, Mrs. J. Appleton Wilson, Mrs. S. A. Treat.

President Hunt delivered his address, which was one of the most impressive and comprehensive speeches ever presented in the history of the Institute. It is printed in full on page 39.

The President: Gentlemen, the next thing in order is the report of the Board of Directors. Before the reading of the report, Mr. William H. Sayward, secretary of the National Association of Builders, as well as the Master Builders' Association of Boston, would like to extend an invitation to the members of the Institute.

Mr. Sayward: Mr. President and gentlemen, I will only detain you for two or three minutes to convey a special invitation to you for this evening. I am secretary of the Master Builders' Association of this city, and am here officially to convey to the members of the Institute, as well as to the members of the Boston Society of Architects, an invitation to be present this evening at our building at No. 166 Devonshire street, at a reception. Learning that this Institute was to meet here some weeks ago, our association conveyed to the Boston society, your entertainers, the wish to offer some courtesy, and they kindly have acceded to our request; and it has seemed to us proper and appropriate that some official should be here this morning and urge upon you your attendance. We feel that we have something

to show you, particularly architects from other cities, which you have not at home. That is, a thoroughly equipped builders' exchange in a building of its own, where the builders in all branches meet every day in a rendezvous, for their own convenience and for the convenience of architects who wish to reach them. It has proved to be of immense value to all in our profession and in yours, if I may be permitted to call the builders' trade a profession, and we desire to take this opportunity to show, particularly to you architects from the various cities all over the country, what would be a very desirable thing to have established in your cities, wherever you reside. In a few cities throughout the country there are builders' exchanges. But we feel here in Boston (you know Boston has a habit of believing that we have everything a little better than anybody else)—we believe that we have the best builders' exchange of any city in the country. We certainly know it is one where the practical affairs of business are conducted more completely and thoroughly than in any other of the builders' exchanges, no matter where they may be located; so we urge upon you to come down and visit us tonight.

The report of the Board of Directors was read by the secretary, Mr. Adler, as follows:

REPORT OF THE BOARD OF DIRECTORS.

To the Fellows of the American Institute of Architects:

Your Board of Directors and your Executive Committee have each held two meetings during the past year. It is significant of the good will and harmony existing within the Institute, and of the general satisfaction of its members with the present condition of its affairs, that during the entire year your officers have not been called upon to adjudicate a dispute, or to take part in any dissensions or differences of opinion between members or Chapters. Besides the discharge of ordinary routine, the meetings of your Board of Directors and of your Executive Committee have been chiefly taken up with action upon applications for Fellowship. Of these there have been thirty-eight, of which thirty eventuated in the election of the candidates, three have resulted in election conditional upon fulfillment of certain requirements of your By-Laws, one in rejection, while four are still pending and awaiting final action.

There have been during the year two resignations from membership. Death has taken from among us during the year just past seven members, of whom three were members of this Board. Two of them, Messrs. O. P. Hatfield and E. T. Littell, had been among the founders of the Institute, and had for many years been among those who guided and shaped its policy. Their absence is mourned not only by those of us who have so long been wont to seek their wise and conservative counsel in the administration of affairs of the Institute, but by the younger ones, who respected their constant, unswerving devotion to duty and their honesty and uprightness of purpose. But while these departed ones had lived their lives up to the climax of the development of their powers, the life of our late lamented secretary was cut off in the midst of a most promising career of usefulness. But few are permitted to make as notable and as extensive a record of powerful work so early in life as it was the good fortune of John Well-born Root to leave behind him.

We rejoice that it was our good fortune to have had in our midst, even for a few brief years, a man of such brilliant mind and of so genial a spirit, but we mourn that he is with us no more, that our meetings will not again be enlivened by his humor and wit, and that our councils will miss his incisive and trenchant remarks replete with good judgment and sound common sense.

The others whom death has taken from us, Fellows John Otter, G. H. Metzler, J. W. Hammond and Herbert C. Burdett, were known and highly respected in their own communities as efficient, capable and upright men whose death leaves a void not easily filled. The sympathies and condolence of your Board are extended to their mourning relatives and friends.

As the secretary of a body like ours carries upon his shoulders almost the entire burden of the details of administration, it can readily be conceived that the death of our late secretary had a most detrimental effect upon the work of the Institute. While his assistant and clerk, Mr. Nimmons, kindly endeavored to carry on the interrupted work of his chief, he could only be expected to carry on the letter of the same and not its spirit; and despite the intelligence and industry of Mr. Nimmons, the soul and the essence of many movements which his master had intended to inaugurate, were lost to us. And when your executive committee elected the present incumbent to fill the vacancy created by the death of Mr. Root, months elapsed before it became possible for him to obtain a firm grasp upon the executive work of the Institute. We therefore crave your indulgence for such sins of omission as may be traceable to this sad and unlooked-for event.

Your Board of Directors begs leave to report with regard to the subject of regulations for the employment of clerks of the works, that they have given the same the thought and consideration due to a matter consigned to their care by a vote of the Institute at its last convention. A statement expressive, in the opinion of your board, of the intentions and position of the Institute, is printed on page 19 of our Constitution and By-Laws and the Report of the Committee on Clerk of the Works, and the entire discussion thereon of the convention of 1890 have been printed on pages 18 to 22 and pages 41 to 60 of the published proceedings of that convention, and are therefore sufficiently before you to take further action should you deem it necessary. Your Board of Directors would, however, remind you that with this, as regards other details of practice, the Institute can only recommend but cannot force upon its individual members or their clients its ideas of what constitutes good professional practice.

Your Board of Directors has also given study and consideration to the mutual relations of Chapters and Institute, and in obedience to the mandate of the convention of 1890 it has endeavored to formulate "a plan for establishing such practical conditions of membership as will be most beneficial to the Institute and its Chapters." The result of these endeavors is the recommendation to leave unchanged our By-Laws making membership of a Chapter and recommendation by the officers thereof an essential preliminary condition for every candidate for Fellowship in the Institute, and to maintain the By-Law giving the Board of Directors full power and free scope in forming and admitting new Chapters.

Our honored president has, in his address, stated forcibly and tersely the conviction of your Board, that the strength of the Institute lies in its Chapters, and that to increase their number and to augment their power should ever be our aim and purpose, and the recommendation to maintain the present status of our laws and regulations upon this subject is made with the desire and for the purpose of furthering the fulfillment of these ends.

Your Board of Directors begs leave to return to two subjects touched upon in the discussion of the report of the Committee on Clerk of the Works of the convention of 1890. The first relates to the adjustment of the mutual relations and responsibilities of architect and client. It has been assumed by too many of us that these relations are of so confidential a character that they should not be desecrated by an alleged note of mutual distrust as implied by the making of a written contract. This seems to us a fallacy. In the absence of an accurately defined statement of the extent and the limitation of their responsibilities the one side is apt to assume that they comprise too much, the other that they comprise too little. Everything that can be done to remove the possibility of misunderstanding between architect and client makes the positions of both stronger and their relations more agreeable. We therefore recommend the adoption in general practice of a form of contract similar to that recommended by your committee and printed on pages 20 and 21 of the Proceedings of the Convention of 1890.

In the same proceedings on pages 47 and 48 will be found an extract from a committee report to a former convention upon some of the evils incident to the system of architectural competitions as now in vogue. Your Board of Directors recommends that the members of the Institute do all in their power by precept and example to discourage the practice of submitting sketches gratuitously or for remuneration inadequate to the work in hand; that they do all in their power to prevent participation in competitions the terms of which are not clearly and

definitely stated and in which satisfactory assurances of intelligence and justice of award are not positively and unequivocally given.

While many of your board are of the opinion that the so-called competition is in itself, even when best conducted, harmful to our profession as well as to the public, they are well aware that this opinion is not shared by a majority of our Fellows. But certainly there can be no doubt but that if competitions must be, it is our duty to minimize their attendant evils.

Upon the subjects of education, the code of professional ethics, the uniform contract, the conservation of public architecture and the action of the National Board of Fire Engineers, the respective committees in whose care the various subjects have been placed will make their own reports.

The Committees on the Architecture of National Buildings and on enactment of laws for controlling the practice of architecture have been discontinued because of the deplorable but quite apparent want of interest of the public and our profession in these matters of such great importance to both.

Your board recommends, to facilitate the work of future conventions, that this convention direct that hereafter all papers to be read at conventions be submitted to the Board of Directors at least four weeks before such conventions, and that these papers be printed and transmitted to the members by the secretary.

On motion, the report of the Board of Directors was adopted and laid on the table for future consideration.

The report of the Treasurer was read by Mr. Samuel A. Treat, as follows :

TREASURER'S REPORT.
RECEIPTS.

Treasurer S. A. Treat, in Account with the American Institute of Architects, from October, 1890, to October 24, 1891 :

By dues received.....	\$4,012.50
Initiation fees.....	160.00
Royalty on sale of uniform contract.....	42.68
Interest on delinquent dues.....	4.00
Balance in Treasury, 1890.....	1,605.04

\$5,824.22

DISBURSEMENTS.

To expenses Annual Convention, including proceedings.....	\$1,386.75
Salary of secretary and expenses.....	1,486.82
Treasurer's expense.....	53.05
Traveling expenses, members Executive Committee.....	312.90
Rent New York offices and taxes.....	214.97
Sundries.....	154.06

\$3,609.15

Balance in treasury.....	2,215.07
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\$5,824.22

The President : The report is referred to an auditing committee, consisting of J. F. Alexander, F. A. Coburn and A. J. Bloor.

The President : The next thing in order is the reports of committees. First, the Committee on Education. Mr. Russell Sturgis, the chairman of that committee, is not present to give his report. Next will be the report of the Committee on a Code of Professional Ethics.

The Secretary : The chairman of the committee on the formulation of a Code of Professional Ethics is not here, but he has begged me to state on his behalf, that as he has not been able as yet to note a sufficient crystallization of modes of practice in the relation of architects and the general building public to warrant him in the effort at giving expression to the ideas of the profession upon this all-important subject, and he has not thought it best to submit a report at this convention.

The President : The next will be the report from the Committee on Clerk of Works.

The Secretary : Mr. Gibson is chairman of that committee, and I have a letter from him, in which he states that it is his opinion that the committee had for the present exhausted the subject in the report submitted at the last annual convention, to which reference has been made in the report of the board of directors.

The President : The next in order is the report of the Committee on Uniform Contract.

The Secretary : Mr. Hatfield, the chairman of that committee, died during the year. I am also of that committee. I will report on behalf of the committee that it has been observing carefully the working of the form of contract which was adopted two years ago and noting its defects. While some have been discovered, it was the opinion of the committee that it was not best, after this form of contract had been adopted, to make changes hastily ; but notes are being taken so that probably by the next convention there will be such alterations and modifications of the form of contract as will remove many objections that have appeared to its use. It is but just to add here that the Committee on Uniform Contracts of the Institute has found its joint committee from the National Association of Builders eager to co-operate in every respect with it in endeavoring to find how the form of contract adopted two years ago can be improved and advantageously modified, and there is no doubt but that in the course of the coming year some modifications will be reported.

The President : The next report in order is that of the Committee on the Conservation of Public Architecture.

The Secretary : Mr. Upjohn is chairman of that.

The President : He does not seem to be here. Next in order is the report of the Committee on Conference with the National Board of Fire Engineers.

Mr. Alfred Stone : Mr. Le Brun of New York is chairman of that committee, but I would state that the committee that was appointed for the purpose met in New York with the committee of the Board of Underwriters and also with a committee from the Firemen's Association, and I think that the action of the members from this body was wise in not promulgating a set of minute detailed conditions for building, which would, I think, have been very unfortunate ; and the work done was simply to advise certain general principles which covered building laws. It was the desire of those present that the committee should be continued and that the meeting should be held in Cleveland in February, when the National Builders' Association meet there, and that there should be a continued conference in regard to this matter. Therefore, if it is the wish of the American Institute to have a hand in the matter of regulating the construction of buildings or in the

framing of laws to that effect, it would be well to continue this committee or appoint another so as to coöperate with the association, and that committee will be called on to meet with them in Cleveland in February next.

The President : There is a proposed amendment to Section 3 of Article I of the By-Laws. It was proposed at the last convention, and read thus :

All architects who shall have been actively engaged in the honorable practice of their profession for ten years or more, and shall then have retired from active practice, and who shall not have engaged in any business or trade, may retain the rights and obligations of fellowship.

The proposed amendment is now open to discussion. Are there any remarks to be made on the subject ?

The amendment to the By-Laws was adopted.

The President : It has been suggested that we might proceed now to have one of our papers read.

Mr. Windrim read his paper on Architecture and the United States Government. (Printed on page 42.)

Mr. Yost moved a vote of thanks for the paper which had just been read, and it was unanimously passed.

Mr. Stone : While upon this subject, I would like to ask the secretary to state, if he can, just the position of this question before the Institute as to a committee or anything of that kind, so that we will know something about it. That is, I think some action has been taken before. Just the history of it ; where it stands.

The Secretary : Mr. Chairman and Gentlemen : The subject of Mr. Windrim's paper has been before the Institute at several conventions, as also before the Western Association of Architects. Both bodies maintained for a number of years a committee that was charged with the duty of endeavoring to secure congressional legislation upon the lines indicated by Mr. Windrim. For several years I was chairman of a committee of the Western Association. In that capacity, in conjunction with Mr. Bloor and the late Mr. Littell, we made a number of efforts to secure a hearing before the committee on buildings and grounds of the house of representatives. There were during that time several bills bearing upon the subject introduced into the house ; one by Mr. Stockslager, which we thought was very good ; another by Mr. Hubbell. These bills always, however, died before the termination of the session of congress, before any definite action had been taken upon them, as far as we were able to observe. There was, until the time of Mr. Windrim, an opposition to any action of the kind desired by us from the then incumbents of the position of supervising architect. It has been, perhaps, the misfortune of the government that it imposes great responsibilities upon its officers and places but small remuneration, and it has, therefore, been difficult generally to secure men of large caliber. It was our misfortune when in Washington to come across small men in large places (laughter), who liked very much to retain their positions. It was not until Mr. Windrim's day that we met with any support, and what Mr. Windrim has read to you shows the extent to which he worked, and the lines upon which we stand. But even in Mr. Windrim's day we found opposition from the many hangers-on of that office, and these kitchen, backdoor influences are very strong in Washington. If we wish to attain anything, we have got to do something more than go to Washington and lobby and orate before a committee of congress. It will do us no good. There is but one way by which the congressman can be influenced, but one way by which he can be reached, and that is by home influences. If we each of us will succeed in convincing our friends, our clients at home, that this reform is a reform, that it is something to the general interest of the community, that it is something in which everyone throughout the United States is interested,—if we will do that, then we will bring to bear indirectly upon each of our congressmen an influence which he will find it difficult to resist ; which will be stronger than these backdoor influences at Washington. Again, the press, not the professional press—its power to reach the general public is small,—but the great daily press is all-powerful in this matter. But, on the other hand, the daily press, while to a certain extent it leads public opinion, yet also follows. That is, it rarely happens that the daily press is prepared to take up a subject and advocate it strongly unless it finds that there is a strong public opinion behind it. So that it is our duty as individuals to labor with our home acquaintances and with the home press, and to see to it that before the assembling of the next congress there is something that approaches a general consensus of public opinion making itself known. If we will do that, then a committee appointed by this body can approach the committees of both houses of congress and will have a constituency behind it. After all, the five hundred or so members of this Institute are to the population of the United States but a small fraction. We must have something behind us, something more than the resolution of the Institute. Whenever we have that, then it will be time for the Institute to appoint a committee to resume the work of the one which has been discontinued by the present Board of Directors.

Mr. Bloor : Mr. Adler's recollection agrees entirely with my own, and also the measure that he would adopt for carrying out the principles of the Institute. But I would like to say that William A. Potter, when he was supervising architect of the Treasury, in one of his reports advocated the changes which Mr. Windrim now advocates.

Mr. Van Brunt : I would like to ask, in view of the recommendation which has been made by the secretary, that each one of us individually bring such influence as he can to bear upon the local representatives and the local press, that his hands should be strengthened by a more formal statement of our requirements and of the duties of the profession in respect to public buildings than seems to be yet in existence. Mr. Windrim's paper would of course be of great value ; but it seems to me that something more than

that paper should be in the hands of every individual present, in the form of a draft for a bill. If it would be possible to formulate from the numerous bills which have been before congress on this subject a brief and definite and imposing statement of the attitude of architects and the efforts and the means by which their wishes can be carried out, it would greatly facilitate the objects of our present discussion.

Mr. Carlin moved the following resolution, which was passed:

Resolved, That the subject of the reform of the methods of preparing designs for national buildings be referred to a committee to be appointed by the president, and that this committee be instructed to make a preliminary report at tomorrow's session of this convention.

The President: The secretary will now read the paper of Mr. Baumann.

The Secretary: I must apologize in advance for the reading of this paper of Mr. Baumann's. Mr. Baumann's personality, and the remarks and illustrations with which the papers read by him before conventions are accompanied are perhaps of even greater interest than the papers themselves, and on Mr. Baumann's behalf I ask you to excuse their absence.

The secretary read the paper of Mr. Baumann upon the Sanitary Protection of Residences (printed on page 46).

On motion, a vote of thanks was unanimously voted to the author of the paper, and it was also voted that it be printed with the proceedings.

The morning session was then adjourned.

FIRST DAY—AFTERNOON SESSION.

The convention was called to order at 2:30 P.M., President Hunt in the chair.

The President: Gentlemen, it has been the custom for the president to nominate two committees on nominations, and unless you otherwise order it I will nominate those committees at present, so that they may have time to properly organize and discuss the merits of candidates to be put up for nomination and election. For the first committee I will nominate Messrs. R. S. Peabody of Boston, A. J. Bloor of New York, E. F. Fassett of Portland, S. V. Shipman of Chicago, and George W. Rapp of Cincinnati. For the second committee I will nominate J. F. Alexander of La Fayette, George B. Ferry of Milwaukee, J. W. Yost of Columbus, W. G. Preston of Boston, and A. P. Cutting of Worcester.

A Member: It seems to me that a member of the Board of Directors cannot serve on the nominating committee, if I remember rightly.

The Secretary: There is nothing prohibiting either an officer or a member of the Board of Directors from serving in that capacity.

Mr. Van Brunt: In view of the recommendations or suggestions of the president in his address regarding the appointment of honorary members of the Institute, and in pursuance of action of the Board of Directors, the following names have been suggested as worthy of consideration and of election to the position of honorary member. These names are the names of gentlemen who are connected with professional schools in this country and elsewhere, and whose work lies at the root, of course, of all the future architecture of the country and of the world. These names you will all recognize as those of men of force and character.

HONORARY MEMBERS.

J. Horbury Hunt, president of the Society of Architects, New South Wales; Prof. Warren F. Laird, of the University of Pennsylvania; Prof. William R. Ware, of Columbia College; Prof. N. Clifford Ricker, of the University of Illinois; Mr. and Mrs. S. P. Avery, R. T. Auchmuty, Henry G. Marquand, C. F. McKim, A. F. Schemerhorn, Anthony Drexel, John Baird.

The motion was put and the list of persons as given unanimously elected to honorary membership.

Mr. Yost presented a resolution, as follows, which was adopted:

Resolved, That the Board of Directors is hereby requested that in making preparations for future conventions of the Institute it will cause to be printed its own report, also all reports of standing and special committees, as well as all papers intended to be read before the convention, and to submit all of them to the Fellows of the Institute at least two weeks before each convention.

The President: The next thing in order is a paper which was called for this morning, but which needed certain illustrations. That is the paper on the Construction of High Buildings, by Mr. W. L. B. Jenney, of Chicago. Mr. Jenney, I believe, now has his illustrations with him.

Mr. Jenney then read his paper upon the Construction of High Buildings. (Printed on page 41.)

On motion, a vote of thanks was extended to Mr. Jenney by the convention, and it was voted that the paper with illustrations be printed in the proceedings.

Mr. Stone: The Board of Directors thought it would be well to enter upon the minutes a record in regard to the death of directors who have died during the year, and this report is a report from the committee, which I will now present:

RESOLUTIONS UPON THE DEATH OF THREE MEMBERS OF THE BOARD OF DIRECTORS.

Since the last annual meeting the American Institute of Architects has been called upon to mourn the loss of three valued members of the Board of Directors, and it is eminently fitting that we take this occasion to publicly recognize our loss and to cause to be spread upon our records a tribute of respect to their memory.

John Wellborn Root, the first secretary of the consolidated Institute, in pursuance of the duties of his office, attended a meeting of the Board of Directors in New York within two weeks of his sudden and unlooked-for decease, and left that meeting to attend to professional engagements at Atlanta and Chicago, reaching home to meet for the first time the architects who had been selected to design the buildings for the approaching World's Columbian Exposition, and it

is not too much to say that his individual influence and advice were very largely instrumental in shaping the course which has inaugurated the work that is now so successfully progressing.

The profession of architecture has lost in the early death of Mr. Root a member who, by his originality in design, his ready conception of large problems, his facility of expression with the pencil, the pen and the voice, together with his large executive ability, gave promise of a brilliant future.

The work which he has left, as monuments with which his name will be honorably associated, and the promise of still higher achievements, would, had he lived, given him a rank among the really great architects of the age.

Mr. O. P. Hatfield, one of the original members of the Institute, always one of its active members, and for many years its faithful and model treasurer, died honored of all who knew him as a trusted, faithful, painstaking and honest man who never spared himself or neglected his clients' interests, and was gathered to his fathers full of honors and of years, and to whom can without reservation be applied the words, "Well done, good and faithful servant."

E. T. Littell, for many years a consistent member of the Institute, and for much of the time a member of its various boards of government, brought to every subject which came under his especial charge, original and wise consideration; and his influence and aid were always given to that which tended to elevate the position of the Institute, and to raise the tone of the profession. He was an active agent in the work of consolidation, and he took a hopeful and generous view of the future of the profession in this country, and believed that the true and hearty coöperation of the best men would establish a high standard of professional conduct, and secure a respected position for those who pursued it.

On motion, the report was unanimously adopted and ordered spread upon the records.

A resolution regarding certificates of membership was presented by George C. Mason, Jr., as discussed, and upon vote was lost.

Mr. W. W. Carlin: Some members have been talking about the idea of this Institute taking some action in relation to the duties which are imposed on architectural photographs and other things which are imported for architects' use. Whether or not we will be able to accomplish anything is a problem. But ought we not to take the stand of protesting against an unjust tax laid upon photographs of foreign objects which are of interest to the profession? It does not come in competition with any of the photographers of this country, because it is impossible to take these photographs in this country. There does not seem to be any good reason for laying that additional tax on the profession. (Applause.) I do not make that as a motion; I offer it as a suggestion.

Mr. Yost: I have a resolution to offer:

WHEREAS, it is important that the profession, especially the members of this Institute, should perfect such organization as will most effectually combine the influence of its members in every work of importance to the profession, and

WHEREAS, the legislation by the several states sought by the profession can be more easily effected through state organizations and their representatives than through local organizations or no organization, and

WHEREAS, there are many other advantages which may accrue and will accrue from state organizations; therefore,

Resolved, that the Board of Directors be requested to suggest to the several local Chapters such form of state organization as can best unite and uphold the interests of the profession and its members in the several states; and

Resolved, that membership in such state organization shall rest upon the same qualifications as in local Chapters, as laid down by this Institute, and that membership in such state organization shall be accepted as the requisite to membership in this Institute now required in local Chapters.

The Constitution provides that the Board of Directors have control of this matter, and this is a resolution requesting them to take such action as in their wisdom they think best.

The resolution as offered was seconded and was referred to the Board of Directors.

Mr. Carlin offered a resolution, as follows:

Resolved, That the American Institute of Architects most emphatically protests against the unnecessary tax laid upon us as architects, by reason of the duty imposed upon photographs of foreign subjects and similar art works; and that this convention appoint a standing committee to consider the subject, and to take such action as may be found practicable.

The resolution was seconded and adopted.

Mr. Stone: There is one thing I would like to ask. Mr. Carlin, the president of the Western New York State Association, has been a very active member of a committee that was appointed for the purpose of having a law passed in New York State to give a legal status to architects, and I should like very much if he could give us some report of the condition of that matter in the State of New York. I think it is a matter of vital importance, and I think those of us who live in smaller states are looking to the result of the effort which is made in New York to accomplish that purpose, in order that we may, if anything is accomplished, use that as a basis for action in other states. It seems to me it is a matter of very great importance, and I trust that, if they have not succeeded, that they are going to press on till they do succeed, and that we in other states will do the same, so that the architect can have a legal position, as a lawyer or physician or clergyman has.

The President: I think that is an excellent suggestion. Will Mr. Carlin favor us with a few remarks on that subject?

Mr. Carlin: I had not made any preparation or given the subject any thought with the idea of presenting it to this convention, and, consequently, cannot give you a well digested idea of the subject, but I will briefly attempt to tell you what we have attempted to accomplish. We have made three attempts to get a bill through the state legislature, and have had a committee at work on it for three years. We took as a basis, in the first place, the bill presented to the Western Association by a committee appointed for that purpose, and revised it to fit the local needs as near as possible. We referred it to a member of a committee which has been appointed by the governor of New York State to codify all of the laws of the state, to cut out the useless language and the illegal and conflicting terms, and got his draft with our suggestions of such a bill as we thought we could get passed. We did not expect to incorporate in that bill all we would like to have, or to throw around the practice of the profession all the legal restrictions that we thought should be, but merely such salient points as we thought we could get passed. The bill provided that a state board of architects should be created, appointed by the state board of regents, without any other restrictions, appointed at will. This board to hold office—to have a portion of its members pass out of existence each year. They were to meet at least once a year in each

of the judicial departments of the state, except the eighth, which is in Brooklyn, contiguous to New York, to hold an examination of such candidates as should present themselves for license; that each person proposing to obtain a license should make his application to this board in writing, and pay a fee of \$5; that this was to be retained by the board; that he was to be examined for his proficiency and knowledge and right to be allowed to practice; that if the license was issued to him he was to pay an additional fee of \$15; that any person who was not at the time of the passage of this act engaged in the practice of the profession, and who should make oath to the fact that he was, at the time of this passage, engaged in the practice, and send this oath to the board—that they should be thereafter debarred from practicing architecture in the state unless in possession of a license. Those who were practicing had only to make oath to the fact to obtain a license, without examination. It was decided by the best authority we could get that we could not get a law passed which would be retroactive in its action. But it was also provided that a person could be tried on charges, by this board, and by the bill which we introduced this board, sitting in the county of the residence of the practitioner against whom charges were preferred, was given the full powers of a county court, with all the powers which they have to compel the attendance of witnesses, produce books and records and testimony, the same as a court of record sitting in that county; that all infractions against the regulations of the board should be tried by this board; and that a unanimous vote of the board was necessary to revoke a license. The only restriction placed on the practice of the profession was that no man should be allowed to designate himself as an architect, or to put out any sign, card or advertisement calling himself an architect, unless he was in possession of a license from this board; recognizing the fact that it is impossible to compel every man to employ an architect to design a building, that he could design it for himself or employ any person whom he saw fit to design it for him, if he did so with the full knowledge that the person so employed did not claim or profess to be a regular recognized practicing architect. We find the same thing in the practice of medicine. We can all of us go to any irresponsible party and get a prescription and follow it if we see fit; and we cannot attempt to legislate the rights which are inherent in every citizen of the state, and the bill did not attempt to do that. The bill was introduced in the early part of the session by a member of one of the districts in Buffalo, and was referred to the committee on laws and legislation. They gave us a hearing and we went—four of us, I think—before the committee, and we succeeded in getting, an almost unheard-of thing, in getting the bill reported favorably out of the committee on the first session. The committee at the session at which we had the hearing reported the bill favorably, and there is an unexplained reason why that bill never turned up. It was finally called out and a vote taken, but the ayes and nays were never called on it, and it was killed in the assembly, apparently through a lack of interest, or for some reason. There was an effort made, which, I am sorry to say, failed, to get the National Association of Builders, in session in New York in February, to formally endorse the bill and pray the legislature of the state for its passage. But the builders took a very conservative view of it, and said that the architects never did anything for them, and they didn't feel like doing anything to help them out; and the resolution which was offered endorsing the bill and asking the legislature to assist in its passage was lost. We covered that fact up as far as possible; did not make any great parade of it. Still, I do not think it had any adverse effect on the passage of the bill. I have a few copies of the bill left, and if there is any member in any other state who would like to profit by the three years' work of the committee, I should be pleased to furnish them with a copy from home.

Mr. Henry C. Meyer: Will you allow me to make a suggestion, though not a member of the Association, but still interested in its work? Some ten or twelve years ago, I had more or less to do with securing legislation which controlled the erection of tenement houses in New York, and subsequently in regard to the passage of the plumbing laws. We found that in trying to get legislation which seemed to restrict the work to certain classes, that it was very necessary, in order that the legislation should stand the test of the courts, that it should be shown that the public safety required that work should be confined to certain classes. It was on that ground that we got the legislation, and on that ground those acts have been sustained in the litigation that ensued. I think the gentlemen active in promoting this measure can show that the public safety could be promoted by restricting the practice to qualified practitioners, and I think if you ignore that fact you may run across a snag when it comes before the governor for signature, and afterward, when somebody contests the constitutional validity of an act that keeps him from making a living in any calling that he wishes to follow.

SECOND DAY—MORNING SESSION.

The convention was called to order at 11 o'clock A.M., President Hunt in the chair.

The President: The first thing in order this morning is unfinished business. There were several committees appointed yesterday. I understand the committee appointed to consider an improved method of obtaining the designs for national buildings is ready to report.

Mr. Van Brunt: The committee appointed to consider an improved method of obtaining designs for the national buildings make a report in the form of a preamble and resolutions, as follows:

WHEREAS, The position of a country in respect to the higher qualities of civilization is, to a large extent, indicated by the condition of its national architecture, as exhibited in its public buildings; and

WHEREAS, Under the present arrangement, whereby all the national architecture is produced in the office of the supervising architect of the Treasury Department, it is physically impossible for that official to give to the numerous

important works of design and construction, referred to his department, that personal care and attention, that special thought and study, through which alone the highest artistic and structurally most economical results may be reached; and

WHEREAS, The best architectural thought of this nation is, for this reason, not to be found in the national buildings, as it is found in the national buildings of every other civilized nation, but rather in the works of private enterprise; and

WHEREAS, The supervising architect of the Treasury Department has recognized frequently in his official reports this serious and mortifying embarrassment in the conduct of his affairs (see, among others, the report of William A. Potter in 1875, and of J. H. Windrim in his reports of 1889, page 6, and of 1890, page 5); and

WHEREAS, It is a reproach to this great country that the Federal buildings should not represent the best and most deliberate efforts of its most accomplished architects; and

WHEREAS, The present method of obtaining architectural designs for government work not only fails to secure the same grade and promptness of professional service which is at the command of private enterprise throughout the country, but entails an unnecessary extravagance in expenditure in time and money; therefore,

Resolved, That the American Institute of Architects, in this, its twenty-fifth annual convention, urgently appeals to all its Chapters organized in the principal cities of the Union, and to all other architects, as soon as possible to lay before each and every member of congress within reach, a copy of this resolution, together with a copy of the paper on this subject read by Mr. J. H. Windrim at this convention, and to personally engage his intelligent interest in favor of any practicable bill or measure which may be presented to congress, with the object of securing that hereafter the plans and specifications of all public buildings to be erected throughout the country shall be obtained by selection or by competitions among architects, so devised as not only to promote the best interests of the country and of the profession, but to give emphatic encouragement to art, and enable our country at last to take its due place in this respect among the most enlightened nations of the world. It is further

Resolved, That a committee of this Institute be appointed to prepare a bill for submission to congress authorizing the secretary of the treasury in his discretion to obtain plans, drawings and specifications for the erection of public buildings through competition by architects, under such conditions as he may prescribe, and to make payment of the expenses for said architects' services out of the appropriation for the respective buildings.

(Signed)

HENRY VAN BRUNT, Chairman.

JAMES H. WINDRIM.

A. J. BLOOR.

ALFRED STONE.

The President: You have heard the report. Are there any observations to be made, or any remarks?

Mr. Cutler: I move the committee's report be accepted, and the resolutions adopted.

Mr. Bloor: I second that motion.

Mr. Carlin: Would it not be well to hedge a little more carefully the manner in which the report treats the subject of competition? As I understand it, this report will go to the representatives, in connection with the rest of the papers, and to some people the idea of a competition is not just what is meant here.

The President: Perhaps it might be well to introduce the words "either by selection or by competition." That would cover the point, for we certainly have taken a certain point against competition. Would that be satisfactory both to the movers of the resolution and to the gentlemen?

Mr. Van Brunt: The committee would accept any such suggestion as that.

The resolution as read and amended was adopted.

Mr. Van Brunt: It was embodied in our report that a committee should be appointed to consider a form of bill.

Mr. Jenney: I move that the same committee should be appointed.

The motion of Mr. Jenney was put and carried.

Mr. Treat: I would like to offer a resolution:

Resolved, That to all students of architecture, and to the wives of Fellows of this Institute who have accompanied them to this convention, as also to the properly accredited representatives of technical journals, all the privileges of this convention, except that of voting, are hereby extended.

The resolution was adopted.

The President: We will proceed to the reading of the papers. The first is a paper on "Comparative Architecture," by Prof. Barr Ferree, of the University of Pennsylvania.

In the absence of Mr. Ferree the secretary read the paper. (Printed in abstract, at the request of Mr. Ferree, on page 44.)

Mr. Van Brunt: It seems to me a reproach that this interesting and instructive and thoughtful paper should be presented to this convention of architects under such conditions that it is practically impossible for us to discuss it. I take it that we are called together to consider the questions which are raised so profusely by this paper; and I venture, in rising to propose a vote of cordial thanks for it, to draw attention to the fact that it constitutes an admirable object lesson to prove how important our action of yesterday was in requiring that all these papers to be read before the Institute in its future conventions shall be printed several weeks in advance and laid before the association, so that they may be properly discussed, and thereby this convention may perform one of its most important functions in an intelligent way. I propose, Mr. Chairman, a vote of thanks to Mr. Barr Ferree.

Mr. Stone: I second that motion. Allow me also to add a word to that, that it not only be referred to the Board of Directors for printing with the proceedings, but I wish that it might be printed under a separate cover, when it is once set up, in order that it might be more generally circulated than it can be in our proceedings. It seems to me to mark an important era in the discussion of this question, and is so important a paper that it ought not to be left between the covers of our proceedings, but it should have a more widespread circulation. I will move that as an amendment.

The resolution as amended was adopted.

The President: The next paper is a paper on the "Antecedents of Gothic Architecture," by Prof. Charles H. Moore, of Harvard University. Mr. Moore is the author of a most scholarly work on Gothic architecture.

Prof. Moore read his paper. (Printed on page 42.)

Mr. Longfellow: The remarks which Mr. Van Brunt made about the paper which preceded this seem to me to be quite applicable to

Mr. Moore's. It is a paper that it is worth our while to look over again and to consider deliberately. Therefore I think that it would be well to do as Mr. Stone proposed to have done with its predecessor. The two papers class naturally together. One is an advocacy of the comparative method of study. The other is in itself an excellent exemplification of the comparative method. Therefore while I move a vote of thanks to Mr. Moore for the paper, I move also that it be printed in the same form and under the same covers with M. Barr Ferree's.

Mr. Upjohn: I second the motion; and I think that the way in which that has been laid down, so analytically, shows that in continuing the architecture of today we ought to continue it from its highest standard and not from the Romanesque. Now the designs for a building have been made in New York lately, and nearly all—I refer to the Cathedral—nearly all the adopted plans or those which were selected were in the Romanesque period instead of being in the Gothic, which I think they should have been.

Mr. Rapp: I would like to suggest that if it is possible that this paper be illustrated, and the illustrations be printed with the paper.

The President: In that case it would be proper, I think, for the author of the paper to select the illustrations.

Mr. Rapp: Yes, sir; and the Institute, of course, to pay the expense. I think it would be a very interesting paper in that way.

The President: It has been suggested, very properly, that we ask Mr. Moore if he has any objection to this paper being published in our proceedings.

Mr. Moore: I had no thought of its being published. It is very incomplete. I have no objection to its going as it is, though I consider it very incomplete.

The President: Are there any further remarks to be made?

Mr. Warren: I suppose it is in order to discuss the paper before the vote is passed. It is with a great deal of diffidence that I venture to speak of the paper that has been so carefully considered by a man whom we all know has given so much study to the subject as has Professor Moore. At the same time, it seems to me that there was one point in it, which ran through the whole paper, which seemed to give a somewhat incomplete view of the subject, and I think the paper itself will bear that out. The paper started out with a definition of Romanesque architecture. Mr. Moore admitted, what we must all admit, that it is exceedingly difficult to make a definition which shall really embrace all the various developments of a style so varied as the Romanesque; and it seems to me that in regarding the Romanesque merely as a transitional style between the Roman and the Gothic it gives an incomplete view of what the Romanesque style really is. As the paper later on pointed out, there are styles, there are developments of the Romanesque, which are not so transitional; and Mr. Moore pointed out that the Romanesque, the Auvergne and the Provence, were not steps toward the Gothic. They had adopted such a system of vaulting, such a system of construction, as would lead to no further development. They were therefore not on the way to the Gothic. They could not be spoken of as buildings that are not yet become Gothic, and they certainly are not strictly Roman. Therefore they would not come under the definition. And the same thing would be true, it seems to me, with regard to the Rhenish buildings, the splendid cathedrals on the German Rhine. The definition of Mr. Moore, as it seems to me, would rule out the Rhenish buildings, the buildings of Auvergne and Provence, entirely from the Romanesque; and it seems to me the consideration of the paper as a whole referred rather to those Romanesque buildings like the style of Normandy and Isle of France, which were transitional to the Gothic. Now Professor Freeman has pointed out, and I think very appropriately, that the Roman style itself ought really to be regarded as a transitional style. It is constructionally a style of the round arch and the solid vault, utterly different in principle from that of the Greeks; but in its ornamentation it entirely follows Greek methods. Now I think the Roman style is transitional to the Romanesque; and rude as are the buildings of the Rhine and Auvergne and Provence, I think we must regard them as in a sense a complete style, a complete Romanesque; and it seems to me that they are really the Romanesque style, while the so-called Romanesque of the Isle of France and Normandy must be regarded as a transitional style leading to Gothic.

The President: While your remarks are very appropriate, at the same time, as I understand it, Professor Moore did not give any definition to Romanesque architecture. He did not wish to harrow the feelings of any man who may be devoted to considering that the highest style of art. But it was natural and absolutely essential to trace through the various stages, as he starts from St. Sophia, going through Lombardy and the Rhine and through into France, to allude to these different steps that were made really in the Romanesque style. He gives no definition of the Romanesque style, but to arrive at the Gothic.

Mr. Warren: I think the definition was given that the Romanesque style is a style not strictly Roman which has not yet become Gothic. It was to that definition that I referred, and I had no idea of upholding the Romanesque as a perfect style; I was merely discussing the question as a historical question.

The President: Gentlemen, all these remarks are very interesting. Has any other member any remarks to make on this subject? Otherwise the resolution as read and as amended, concerning the vote of thanks to the professor, and that this paper shall be not only published and thanks be given to the author, but that the paper shall be printed in our proceedings, and also separately, and that it shall be printed with illustrations, which illustrations the professor will have the kindness to select, at the expense of the Institute, of course. I think that covers the ground of the whole resolution.

The resolution as stated was put and carried.

The President: Gentlemen, the next paper in order is a paper on "Architectural Education," submitted by the Cleveland Chapter of the American Institute of Architects.

Mr. John Eisenmann read the paper. (Printed on page 45.)

Mr. Stone: I move that a vote of thanks be tendered and that the paper be referred to the Board of Directors for publication with the proceedings.

The motion was seconded and carried.

Mr. Van Brunt: The committee continued to prepare the form of a bill to be forwarded to congress, representing the request of this convention that the national government should more directly than at present control the character of the federal buildings hereafter to be constructed, and with a view to making it possible to obtain such advantages as may result from the selection by competition or otherwise of architects for the future federal buildings, herewith respectfully submit a form of bill and recommend its adoption by the Institute.

A Bill to authorize the Secretary of the Treasury at his discretion to obtain the Plans for the Public Buildings erected by direction of Congress under the Treasury Department.

The secretary of the Treasury is hereby authorized in his discretion to obtain plans, drawings and specifications for the erection of public buildings, by direct selection or competition of architects, under such conditions as he may prescribe, and to make payment of the expenses of said architects' services out of the appropriations for the respective buildings. Provided, the general direction of the work shall continue under the office of the supervising architect of the Treasury Department, the supervising architect to be the representative of the government in all matters connected with the erection and completion of such buildings, the receipts of proposals, the award of contracts therefor and the accounts and disbursements of moneys thereunder, and perform all the duties that now appertain to his office, except the preparation of drawings and specifications for such buildings; the said drawings and specifications, however, to be subject at all times to modifications and changes in arrangement of building and the selection of materials therefor as the secretary of the Treasury may direct.

The President: Is this in the form of a resolution, Mr. Van Brunt?

Mr. Van Brunt: This is in the form of a bill to call it to the attention of the meeting and to accompany the paper.

Mr. Windrim: Mr. President, I would like to request the attention of the Fellows of the Institute to the necessity of their giving immediate and very earnest attention to this bill. I would like that they should feel sufficient interest to call upon their congressmen, and have their coöperation, if possible, when it is presented to the body.

Adjourned to Friday, October 30, at 9 o'clock A.M.

THIRD DAY—MORNING SESSION.

The convention was called to order at 9:30 A.M., President Hunt in the chair. Following are the printed ballots as presented by the committees:

BALLOT.

Submitted by the following Committee: J. F. ALEXANDER, Chairman, G. B. FERRY, J. W. YOST, A. P. CUTTING, W. G. PRESTON.	NOMINATIONS.	Submitted by the following Committee: R. S. PEABODY, Chairman, G. W. RAPP, S. V. SHIPMAN, R. M. UPJOHN, E. S. FASSETT.
D. ADLER, Chicago.....	PRESIDENT.....	E. H. KENDALL, New York.
J. G. CUTLER, Rochester.....	SECRETARY.....	D. ADLER, Chicago.
S. A. TREAT, Chicago.....	TREASURER.....	S. A. TREAT, Chicago.
ALFRED STONE, Providence.....	1ST VICE-PRESIDENT.....	G. B. POST, New York.
E. H. KENDALL, New York.....	2ND VICE-PRESIDENT.....	E. C. CABOT, Boston.
W. L. B. JENNEY, Chicago... R. M. UPJOHN, New York... P. P. FURBER, St. Louis... F. BAUMANN, Chicago..... W. G. PRESTON, Boston.... S. HANNAFORD, Cincinnati A. W. LONGFELLOW, Boston CASS GILBERT, St. Paul...	DIRECTOR For three years.	R. M. HUNT, New York. C. F. MCKIM, New York... E. M. WHEELWRIGHT, Bostn. W. W. CARLIN, BUFFALO. J. W. McLAUGHLIN, Cincin. S. S. BEMAN, Chicago. W. S. EAMES, St. Louis. W. C. SMITH, Nashville.
T. A. MORGAN, Atlanta.... G. A. FREDERICK, Baltimore	DIRECTORS For one year in place of Messrs. Littell and Adler	H. J. HARDENBURGH, N. Y. W. L. B. JENNEY, Chicago.
ST. PAUL.....	PLACE OF MEETING....	PITTSBURGH.....
1. Recommend an earlier date for meeting.		

Secretary Adler: Gentlemen, I see that my name is put in nomination for president of the Institute. While I am fully conscious of the honor conferred upon me, still I feel that I cannot accept the nomination, and beg leave to withdraw.

The President: You have heard the remarks of our modest secretary. You can decide whether you will listen to them or not.

The President: Gentlemen, are you ready that the election should now take place? Unless there be some objection I will now nominate the tellers. I will nominate as tellers Mr. W. L. B. Jenney and Mr. H. Langford Warren.

Messrs. Baumann, Nickerson, Briggs and Longfellow were appointed to assist the tellers.

The tellers collected the ballots, and retired to sort and count them.

The Secretary: I have the honor to propose, on behalf of the Board of Directors, the following additions to the nominations for honorary membership: they are, Mr. Francis W. Chandler, Professor of Architecture, Massachusetts Institute of Technology; Eugene Letang, for many years an instructor in the Massachusetts Institute of Technology.

The motion was put, and the gentlemen named unanimously elected to honorary membership.

The Secretary: The committee appointed to audit the accounts of the treasurer makes the report that it has examined the books and

vouchers, and has found them correct. The report was signed by J. F. Alexander, A. J. Bloor, F. A. Coburn.

On motion of Mr. Briggs, the report was accepted and placed on file.

The Secretary: I have received the report of the committee to whom the Board of Directors referred the reports of the Chapters.

On motion, the report was accepted and placed on file.

Mr. Stone: I will move that the documents adopted at this convention shall be referred to the Board of Directors with the power of publishing such as in their judgment it may seem best in the proceedings.

The motion was seconded and carried.

Mr. Shipman: If it is in order I desire to offer a resolution. It is as follows:

Resolved, That the American Institute of Architects indorses heartily the initiatory steps taken by its Illinois Chapter with reference to the establishment of an architectural department of exhibits in connection with the coming World's Columbian Exposition, and authorizes the said Illinois Chapter to represent the Institute in all further steps necessary for establishing the same and insuring its success.

The resolution was seconded.

The President: You have heard this resolution, which I consider to be a very important matter. What will you do with it?

The Secretary: Probably many members of the Institute do not know that the Illinois Chapter has been in communication with the authorities of the Exposition with a view of securing space for an exhibit of matters and things interesting to us as a profession, and with a view of making such minor changes and adaptations in the classification that has been adopted by the authorities of the Fair as will make it possible to bring such exhibits as relate to architecture within easy reach of each other, that they may not be scattered through many buildings, or in many places in the same building; but to bring them together for purposes of comparison. Thus far the Illinois Chapter has received nothing but promises of consideration, but no actual measures have been taken. One of the difficulties has been that, owing to peculiarities of classification, the matter was in the hands of departments, whom it was never possible to find together at the same time in Chicago thus far. But I presume the matter will be adjusted. It may interest you also to know, and it is something that will be of value in connection with this particular matter, that the French government has offered to reproduce the entire collection of architectural subjects in the Museum of the Trocadero, to bring them to Chicago, to leave them there after the Fair, for the people of the United States or the authorities of the World's Fair, the French government proposing to pay the entire cost of transportation and of setting up the exhibits, only asking us to pay one-half the cost of reproduction. (Applause.) I will say further that the Illinois Chapter has appointed as its representative with reference to all steps to be taken in connection with this proposed exhibit, Mr. Henry Lord Gay, who has been for many years a Fellow of the Institute, and that it is intended that he shall take charge of all matters of correspondence, etc., relating to this matter. I tell you this that you may know all that has been done.

On motion of Mr. Briggs the resolution was adopted.

Mr. Shipman: Mr. President, I desire to call the attention of the members of the Institute to the fact that the subject of holding a World's Convention of Architects in Chicago in 1893 has been talked of and canvassed in the Illinois Chapter. I would like to have an expression of the Institute in regard to that. If it is determined to extend such invitation to foreign architectural societies it will be necessary to revive the committee on foreign correspondence of this Institute, which lapsed some years ago, but which, I think, may very properly be restored and renewed. It will be a large undertaking, perhaps, too, for the Illinois Chapter to provide for and take care of all foreign delegates who might attend such a convention; but I think the unanimous opinion is in the Illinois Chapter that they would be rather desirous of undertaking such a duty. But it would devolve, in my opinion, upon the American Institute of Architects to take the initiatory step, and grant authority to open correspondence with foreign societies on the subject. I merely throw this out as a suggestion. My own idea is that the architects of this country might accomplish something for themselves and their country by such a convention.

Mr. Cutler: I think the matter spoken of by Mr. Shipman is a very important and interesting one. No doubt, very much might be done by the Illinois Chapter. It occurs to me that the Institute should now arrange for a special committee, with a view of making such arrangements for a convention of architects representing the entire world, as might be easily done if we start in now. I therefore move that a committee of five be constituted on such a convention, who shall also be a special committee on foreign correspondence, of which Mr. Richard M. Hunt, of New York, shall be chairman, the balance of the committee to be selected by the next president.

The President: Will you please put that resolution in writing. I would like to make the remark, as this is going to come up in the form of a resolution, that it strikes me that it might have the objection of giving the affair two heads; that all this matter of the World's Fair exhibit, of the architectural exhibits there, will be in the hands of a committee in Chicago; and it strikes me that those men would be the appropriate persons also to attend to all matters of a congress of architects to be held at the same time. I think some committee should have the whole matter in hand, of the exhibits and the congress and everything else. I say this with no desire to shirk any responsibility, but I am afraid that there might be a little friction.

Mr. Shipman: In reply to the remark made by the president, I desire to say that, first of all, we desire to divest this of all appearance of localism, and I regard it as of the utmost importance that we should have the sanction and coöperation—that any committee must have the sanction of the Institute and the cordial coöperation of its

members all over the country. I think that a local committee in Chicago would hardly accomplish the object that we have in view. The Committee on Foreign Correspondence of the Institute would have vastly more influence with foreign bodies than any local committee.

Mr. Cutler: I will now read the resolution:

Resolved, That it is the sense of this meeting that a convention or congress of architects should be arranged for, to take place in Chicago during the World's Fair, and that the arrangements for such a meeting shall be made by a committee on foreign correspondence of this Institute, consisting of five members, as follows: Richard M. Hunt, W. L. B. Jenney, D. Adler, C. F. McKim, Henry Van Brunt.

I move the adoption of that resolution.

The motion was seconded, and the resolution as read was adopted.

Mr. Stone: Mr. Chairman, I wish to offer a resolution:

Resolved, That the thanks of the American Institute of Architects be extended to the trustees of the Boston Public Library for the generous use of the new public library building for its meetings, and to the City of Boston for its hospitality in providing the pleasant Harbor excursion, and to the following societies for courtesies extended: The Boston Society of Architects, the Boston Architectural Club, the Master Builders' Association of Boston, the Trustees of the Museum of Fine Arts, the Massachusetts Institute of Technology, the St. Botolph Club, and also to the press of the city of Boston.

The motion was seconded, and the resolution as read was adopted.

A recess was taken, pending the counting of the ballots, after which the tellers reported as follows:

Mr. Jenney: Gentlemen, there were 89 ballots cast. The result of the ballot is as follows:

For president—D. Adler, 14; E. H. Kendall, 73.

For secretary—J. G. Cutler, 14; D. Adler, 72.

For treasurer—S. A. Treat, 87.

For first vice-president—G. B. Post, 42; Alfred Stone, 47.

For second vice-president—E. H. Kendall, 15; E. C. Cabot, 62.

For directors for three years—W. L. B. Jenney, 16; R. M. Upjohn, 29; P. P. Furber, 30; F. Baumann, 18; W. G. Preston, 29; S. Hannaford, 24; A. W. Longfellow, 40; Cass Gilbert, 37; R. M. Hunt, 77; C. F. McKim, 62; E. M. Wheelwright, 64; W. W. Carlin, 59; J. W. McLaughlin, 51; S. S. Beman, 55; W. S. Eames, 52; W. C. Smith, 41.

For directors for one year—T. A. Morgan, 17; G. A. Frederick, 30; H. J. Hardenburgh, 60; W. L. B. Jenney, 58.

For place of meeting—St. Paul, 24; Pittsburgh, 37.

For an earlier date for meeting, 16.

On motion of Mr. Cutler the election was made unanimous.

The officers for the ensuing year are as follows:

OFFICERS:

President—Edward H. Kendall, New York, N. Y.

First Vice-president—Alfred Stone, Providence, R. I.

Second Vice-president—E. C. Cabot, Boston, Mass.

Secretary—Dankmar Adler, Chicago, Ill.

Treasurer—Samuel A. Treat, Chicago, Ill.

Directors for three years—Richard M. Hunt, New York, N. Y.; C. F. McKim, New York, N. Y.; E. M. Wheelwright, Boston, Mass.; William Worth Carlin, Buffalo, N. Y.; James W. McLaughlin, Cincinnati, Ohio; S. S. Beman, Chicago, Ill.; William S. Eames, St. Louis, Mo.; William C. Smith, Nashville, Tenn.

Directors for two years—W. M. Poindexter, Washington, D. C.; George B. Ferry, Milwaukee, Wis.; C. J. Clark, Louisville, Ky.; George C. Mason, Jr., Philadelphia; Levi T. Schofield, Cleveland, Ohio; E. F. Fassett, Portland, Me.; M. J. Dimmock, Richmond, Va.; A. W. Longfellow, Boston, Mass.

Directors for one year—Charles A. Cummings, Boston, Mass.; Henry Van Brunt, Kansas City, Mo.; James G. Cutler, Rochester, N. Y.; Charles E. Illsley, St. Louis, Mo.; James H. Windrim, Philadelphia, Pa.; H. J. Hardenburgh, New York, N. Y.; William Le Baron Jenney, Chicago, Ill.; Cass Gilbert, St. Paul, Minn.

STANDING COMMITTEES:

Committee on Foreign Correspondence—Richard M. Hunt, chairman, New York, N. Y.; William Le Baron Jenney, Chicago, Ill.; Dankmar Adler, Chicago, Ill.; Charles F. McKim, New York, N. Y.; Henry Van Brunt, Kansas City, Mo.

Committee on Education—Professor Russell Sturges, chairman, New York, N. Y.; Professor William R. Ware, New York, N. Y.; Professor N. Clifford Ricker, Champaign, Ill.; T. M. Clark, Boston, Mass.; Professor C. Francis Osborne, Ithaca, N. Y.

Committee on Code of Professional Ethics—Louis H. Sullivan, chairman, Chicago, Ill.; E. H. Kendall, New York, N. Y.; W. W. Carlin, Buffalo, N. Y.; Henry Van Brunt, Kansas City, Mo.; R. W. Gibson, New York, N. Y.

Committee on Clerk of Works—R. W. Gibson, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; W. G. Preston, Boston, Mass.; J. W. McLaughlin, Cincinnati, Ohio; J. G. Cutler, Rochester, N. Y.

Committee on Uniform Contract—O. P. Hatfield, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; Alfred Stone, Providence, R. I.

Committee upon Conservation of Public Buildings—The presidents of Chapters.

Committee on Competition Code—(To be appointed by the Board of Directors).

Mr. Stone: In view of the small vote for the choice of a place for the next meeting, I move that this vote be simply considered as an indication of the wishes of the convention, but that the Board of Directors have power to appoint the next annual meeting at such place and time as in their wisdom they may think best.

The motion was seconded and carried.

Mr. Kendall: I wish to say a few words upon the result of this election. (Applause.) I have to offer the convention my very sincere thanks for this great honor. My nomination was absolutely

unexpected, and it is exceedingly grateful to find myself elected, but it is with two reservations. I am one of those who has from the beginning been opposed to change in office in this Institute. I had hoped to see, Mr. President, you mount this platform while physical ability remained, and when that should have failed I hoped to be one who should help to place you there and hold up your hands in our continued service. (Applause.) The other reservation is, that, since rotation must be, I am exceedingly sorry that Mr. Adler has found it necessary, desirable, to decline, from the fact that I think the sphere of our chief usefulness in the next two or three years will be in the West, pending and during the Columbian Exhibition now close at hand. Mr. Adler is a man of great experience in the management of both eastern and western interests; he is familiar with them both; and I think he would have done us great service in the place. However, I trust that another year he will withdraw his objection and serve us during the continuance of the Columbian Exhibition. You, sir, Mr. President, do not know the obstacles (fortunately the convention does), that you have thrown in the way of any successor. We have been governed here at high pressure; 150—200 pounds to the square inch. (Applause.) Now, gentlemen, we shall have to come down to low pressure. If I can give you two or three pounds to the square inch I shall be very happy; but still, if at any time this low dynamic value should be attained I hope you will help me to put on steam. (Applause.)

The President: It is very touching to me, gentlemen, to hear these remarks, but it is decidedly in the interests of this Institute that rotation in office, of the president especially, should be made, in order to keep up a live interest in the Institute. We have had for our two former presidents men who very worthily held that position, and at the same time, in their old age (they both held it till they died), there was a feeling that they could not on account of their age take that active interest which they should take. The very idea of rotation in office makes us all take an active interest; and it would be one of the most detrimental things, in my opinion, if you should ever break this rule, which has been established, of not allowing any officer to hold office more than two successive years, as president, I mean. I thank you for all the hearty support which you have given me. (Applause.)

Mr. Fassett: The election of Mr. Kendall as president, and Mr. Stone as vice-president, leaves two vacancies again in the Board of Directors. Would it not be necessary to fill those vacancies?

The Secretary: I move that Mr. A. W. Longfellow, of Boston, and Mr. Cass Gilbert, of St. Paul, the two candidates for directorship who have received the highest number of votes next to those already elected, be declared, by the unanimous vote of this convention (that is the only way in which they can be elected), directors in place of the two who have been raised to other positions.

The motion was seconded and unanimously carried.

Mr. Illsley: I beg leave to offer a resolution:

Resolved, That a committee of three be appointed by the chair to prepare for issue in pamphlet form such suggestions to the promoters of architectural competitions as the directors may approve, and that the directors be authorized to print the same, when approved, for free distribution to such members as may apply for the same, and one sample copy to be sent to every member as soon as issued.

On motion of Mr. Carlin, the resolution was adopted.

[The chair did not appoint the committee as called for in the resolution of Mr. Illsley.—ED.]

On motion of Mr. Cutler, the convention was adjourned.

THE CONVENTION VISITOR.

There were two programmes prepared by the committee of the Boston Society of Architects. A business programme, of the carrying out of which a full report has been given, and the entertainment programme, of which space will allow but passing mention and deserved praise.

At the close of the first session of the convention, the Boston Society of Architects gave a lunch at the Copley Square hotel, which was the headquarters of the Institute during the convention.

By the courtesy of the Board of Public Institutions, a city steamer, the J. Putnam Bradlee, was placed at the disposal of the visitors, and a round of the harbor and a visit to the several institutions was made.

In the evening of the second day of the convention a banquet was given, but because the place of giving it was unavoidably changed at the last moment it was not a complete success except from a culinary standpoint. It was not known to the newspaper representatives who presided as toastmaster, who the speakers were or what they said, the tables being scattered through several rooms and halls in a large hotel.

To the western visitor who saw Boston for the first time the experience was novel and full of the realization and comparison of impressions. With an odor that told him that the sea was near, mingled with other odors that told of man's encroachment upon its borders, he first sets his feet upon the streets of this old city. Old buildings and new, mixed together like the odors, telling of a past and a present, the crooked streets telling of an older time, like the paths of forest and prairie familiar to his boyhood, gave a sense of bewilderment that could not be dissipated until he saw the sign, common on the vacant premises along Tremont street, "To be let," then he knew he was in Boston, the city of precise expression, and was reminded of the story of the Boston gentleman who was dying. The doctor asked him if he wished to leave a message for an absent son to whom he had referred. The old Bostonian, with his last breath, said, "I did not refer to him, I only alluded to him." This correction of the crude, ungrammatical "To let," of New York or Chicago, like the crooked

streets, reminded him of the days when he learned to conjugate the verb to be, a lesson that is never learned, but enters into the life of man, and is called hope. Perhaps that is the charm of Boston. One is always anticipating what may come in view at the next turn.

The exhibition of drawings, which will be referred to in a later number, occupied the main hall of the new public library adjoining the room in which the convention was held.

A reception was given by the Boston Master Builders' Exchange in their new building on Devonshire street, which was instructive as it was enjoyable. The entire six stories were opened to the visitors, an elaborate lunch was served in the main hall, every builder in the offices above had his latch string out, Secretary Sayward was there, and besides the means of enjoyment that knew no limit each architect saw the advantage to the profession an exchange building in his own city would be, and many went home with the resolve that the architects should do all in their power to induce builders to imitate their Boston friends.

The museum of fine arts, the architectural department of the Institute of Technology, the Walter Crane exhibit and many other interesting places were thrown open by the hosts, the Boston Chapter, for the entertainment of the members of the Institute, and the following list of architectural work was carefully prepared and placed upon the programme. It is here printed that it may be preserved by those who may at any time visit Boston:

Portsmouth, New Hampshire, Old Colonial Houses (Governor Wentworth House). *Salem, Massachusetts*, Old Colonial Houses. *Marblehead, Massachusetts*, Old Colonial Houses—Boston & Maine Railroad, Eastern Division; station on Causeway street. Time 50 minutes. *Newport, Rhode Island*. *North Easton, Massachusetts*, group of buildings by H. H. Richardson—Old Colony Railroad; Station on Kneeland street. Time 1 hour, 2 minutes. *Cambridge, Massachusetts*, buildings of Harvard University, High School, Library, City Hall, Old Colonial Houses. In *Boston*, Old Buildings—Old State House (head of State street), State House (on Beacon Hill), King's Chapel (corner of Tremont and School streets), Old South Church (Washington street), Faneuil Hall, Quincy Market, Old North Church (Salem street), Park Street Church, Copp's Hill Burial Ground (near Old North Church), Old Houses, Salem street. Recent Buildings—New Boston Public Library, Trinity Church, Exchange Building (State street), Fiske Building (State street), Ames Building (Washington street), Bell Telephone Building (Milk street), Shreve, Crump & Low Building (Tremont street), Youth's Companion Building, Pope Building (Huntington avenue), Commercial and Warehouse Buildings on Lincoln and Bedford streets, City Dwellings on Commonwealth avenue, etc.

The architects were generally entertained at the Copley Square hotel, at which headquarters were located, and at the Huntington, both of which hotels gave the greatest satisfaction in catering to the comfort of guests. It added to the impression received, the indefatigable labors of the Boston Committee, that that city is one in which the visitor is always welcome and always finds the time of his stay much too short.

The most beautiful time of year in the latitude traversed by those attending the convention and the superb accommodations now common to all railroads made the going and coming seem the best part of the convention. Those who went from Chicago over the Grand Trunk route by way of Montreal found the scenery along the great lakes, the St. Lawrence and through the New England hills gorgeous in autumn tints, and though one of the longest of the routes to Boston it was declared the most delightful by those who appreciated the scenery and comfortable traveling.

A drive, in which six or eight tallyho coaches lead the procession through the city and suburbs, was given the visitors directly after the last session. The new Franklin Park, Jamaica Plains, Brookline and other points of interest were visited, and as man has constructed splendid drives and nature gave one of her best Indian summer days, the drive increased the fascination Boston had for the visitors.

Mosaics.

THE annual Tuesday Afternoon Lecture Course of the Art Institute of Chicago for members and students opened Tuesday, November 3, with a lecture by Mrs. Maud Howe Elliott; subject—"Foreign Art in the United States"; to be followed by: November 17, Rev. Jenkin Lloyd Jones—"Not the Arts but Art"; December 1, Frederick Keppel—"Personal Sketches of Some Famous Etchers"; December 15, Mr. Walter Cranston Larned—"Barye and his Works"; December 29, Mr. Walter Crane (of London)—"Design in Relation to Use and Material"; January 12, Mr. Edgar Cameron—"Observations upon Color"; January 26, Mr. W. M. R. French—"The Innocency of Vision"; February 9, Rev. F. M. Bristol—"Subject not yet announced." The remainder of the course will be announced later.

THE Yale & Towne Manufacturing Company of Stamford, Connecticut, has a world-wide fame for its manifold products from metals, but it would be a difficult thing to decide whether that fame has arisen from the utility and accuracy, or from the beauty and gracefulness of the forms given to the various articles that are stamped with the company's legend. Each are unparalleled examples of the large possibilities of expert mechanism. The sense that perfection and beauty are handmaidens that should never be separated seems to be the pervading and prevailing thought that directs and governs everything which this great manufacturing company essays to do, therefore the mail brought no surprise in the quaintly conceived and handsomely illustrated, printed and bound little book the company has just issued to emphasize the high grade builders' hardware it is producing in such almost infinite variety. While much care and attention has been given to the engraving and printing in its production, and it is a gem in that respect, it is evident fully as much consideration has been given to the letter-press matter, the nature of which can be inferred from its alliterative title: "Artists and Artisan."

Our Illustrations.

View in residence of Thomas H. Williams, Jersey City, New Jersey.

Residence of Marshall S. Mahurin, Fort Wayne, Indiana; Wing & Mahurin, architects.

Residence for Charles H. Kellogg, Avondale, Ohio; A. O. Elzner, architect, Cincinnati, Ohio.

The Dooly Block and Hotel Ontario, Salt Lake City, Utah; Adler & Sullivan, architects, Chicago.

Interior view Administration building World's Columbian Exposition, Chicago; Richard M. Hunt, architect, New York City.

Drawings awarded first place in the Clark Medal Competition of 1891. Subject: The Acropolis. Drawings by George G. Will, Omaha, Nebraska.

Views of Construction of The Fair building, Chicago; Jenney & Mundie, architects. The views illustrate the lecture of W. L. B. Jenney at the Boston convention of the American Institute of Architects.

Clifton M. E. Church, near Cincinnati, Ohio; Crapsey & Brown, architects, Cincinnati. This church is about to be erected in one of the suburbs of Cincinnati. The walls will be of local hill stone trimmed with Buena Vista freestone. Interior finish, quartered oak; vestibule, mosaic tile. Partition between Sunday school and main auditorium is made of iron and cathedral glass, is hung on weights similar to ordinary window sash, and slides up into the roof chamber. Size of entire building, 60 by 84 feet; audience room, 35 by 57 feet and will seat three hundred; Sunday school will also seat three hundred; cost, complete, \$25,000.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Residence of W. C. Goudy, Chicago; Treat & Foltz, architects.

Residence of W. J. Goudy, Chicago; Burnham & Root, architects.

Residence for W. H. Bartlett, Evanston, Illinois; J. L. Silsbee, architect, Chicago.

Oak Park Cycling Club House, Oak Park, Illinois; S. S. Beman, architect, Chicago.

Hotel Building for W. A. Giles, Austin, Illinois; Beers, Clay & Dutton, architects, Chicago.

"The Bordeaux" Apartment building, Chicago; Frederick Baumann and J. K. Cady, architects.

Congregational Church (completed part), Ridgeland, Illinois; Patton & Fisher, architects, Chicago.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT, {
CHICAGO, November 5, 1891. }

Architects, builders, engineers and manufacturers of building material, and promoters of new enterprises are all anxiously studying the situation, and the probabilities for the next six or twelve months. Great anxiety exists for a revival of activity upon a large scale. Confidence is quite general in an improving tendency; it is based upon several conditions, chief of which is the large crops of the present year. There is also another basis of faith, namely, the slowing-up process under which the country has been recuperating in a certain sense for the past year or two. A general liquidation of values has been in quiet and successful progress. The country is not overloaded with debt, nor are enormous stocks of goods or merchandise awaiting distribution, nor are business men generally in stress or trouble, but in a general way the business of the country is in a healthy condition; production is under good control, trade is expanding, building operations are enlarging considering the season of the year, and prices on the whole are running as near to cost basis as it is well they should. All these are favorable indications. Were it necessary to point out weak and dangerous spots, it would not be an easy matter to do so. One possible danger is that of financial depression, growing out of either a too rapid expansion of business, or a too limited supply of money. Our financial affairs seem to be pretty well managed, notwithstanding the just complaints that are being made of a too moderate supply. It is quite probable that the country demands and needs more currency than is available in the ordinary channels of trade and business. Manufacturing activity is reported from all sections of the country; much new building is contemplated for the winter; railroad building has been prosecuted on a very moderate scale, but there are indications that next year will mark an improvement sufficient to impart some vitality to the iron and steel industries. Manufacturers of building material are preparing to be able to supply a heavier demand next year than this. The lumber manufacturers have had a fairly good season. Manufacturers of finishing material for interiors of buildings, stove manufacturers and the manufacturers of small machinery for shop, farm and mine, have all had a fairly satisfactory season, and look forward with much confidence to a better season in 1892.

Synopsis of Building News.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Baltimore, Md.—Architect A. Mason has prepared plans for a \$12,000 public school, one story; size, 68 by 103 feet, brick and stone.

Architect B. B. Owens: For the Harlem Park M. E. Church, a two-story church; size 60 by 100 feet; brick and stone; cost \$35,000.

The Hanover Street Synagogue congregation are considering building a new building, at a cost of \$150,000.

Chicago, Ill.—Architects Beers, Clay & Dutton: For Mrs. Mary R. Nelson, at 557 to 561 Madison avenue, three three-story and basement residences; of pressed brick and stone, furnaces, etc.

Architects Patton & Fisher: For the State Savings, Loan and Trust Company, at Quincy, Illinois, a three-story bank building, 30 by 125 feet, to cost \$30,000; cut stone front, granite tile roof, hardwood interior, marble and tile work, electric light, hot-water heating; making drawings. For the McCormick Harvesting

Machine Company, at East St. Louis, a three-story and basement warehouse, size 110 by 140 feet, to cost \$25,000; common brick, gravel roof, steam heat, electric light, elevators; making plans. Also making plans for three-story and basement High School, to accommodate five hundred pupils, to be erected at Muskegon, Michigan; pressed brick, stone and terra cotta front, hardwood finish, steam heat, slate roof; cost \$50,000. Also just let contracts for the Buena Vista college, two-story, basement and attic, 80 by 75 feet; to be of pressed brick and stone and cost \$22,000. For S. H. Little, at Birchwood Beach, a two-story, basement and attic frame residence; stone basement, steam heat, etc. For F. D. Rood, at Normal Park, a three-story flat building, 66 by 59 feet; to cost \$15,000; pressed brick and stone front.

Architect Thomas Wing: For George V. Hankins, on the southwest corner of Indiana avenue and Twenty-sixth street, a four-story and basement apartment house, 100 feet on the avenue and 130 on Twenty-sixth street; pressed brick, stone and terra cotta front, marble floors and wainscoting, steam heat, etc.; cost \$75,000.

Architect J. L. Silsbee: For W. A. Hammond, at Evanston, a two-story residence, 45 by 80 feet; to cost \$30,000; pressed brick and stone, slate roof, hot-water heating, electric light; just begun work. For the State of West Virginia, a two-story frame building, 128 by 80 feet in size, to cost \$25,000; to be erected at the World's Fair; finishing plans. For H. N. May, at 117 Astor street, a two-story, basement and attic residence, to be of granite front, have hot-water heating, and cost \$30,000; the foundation is being put in.

Architects Freijls & Bartlett: For Mrs. E. S. Davis, on Oglesby avenue, Woodlawn, a two-story and basement stone and flat building, of pressed brick and stone; cost \$10,000.

Architects Faber & Pagels: For W. S. Forrest, on Lake avenue near Thirty-ninth street, a three-story residence, to cost \$30,000, and a two-story barn, to cost \$7,000; mansard roof of slate, copper dormers, steam heat, electric light; making plans.

Architects Lamson & Newman: For C. E. Anthony, on Seminary avenue, a two-story residence; to have a stone front, gravel roof, hardwood interior, stained and plate glass, furnace, etc. For Graves & Carr, on Jackson boulevard and Homer street, a two-story, stone front flat building; to have hardwood finish, electric light, stained and plate glass, steam heat; cost \$13,000. For Doctor Palmer, on Washington boulevard, two three-story residences of Wyoming red-stone fronts, slate roof, copper cornices, hardwood finish, steam heat; cost \$20,000. For A. Metz, on Root street, town of Lake, a three-story stable, 50 by 125 feet, of pressed brick and stone, electric light, steam heat, etc.; cost \$14,000.

Architects Edbrooke & Burnham: For Jason H. Shepard, a handsome three-story residence in the French Renaissance; to have a front and side of Berlin granite, with roof of Spanish tile, the interior to be all finished in hardwoods, marble and tile work, hot-water heating, etc.; cost \$75,000.

Architect M. H. Church: For J. A. Edwards, corner of Forty-eighth street and Michigan avenue, a two-story residence of Bedford stone front, hardwood interior, furnace, etc.; cost \$20,000. For R. M. Jaffray, in Lake View, a two-story residence, of pressed brick and stone, furnace, etc.

Architects Flanders & Zimmerman: For Mrs. F. Winslow, on Lincoln Place, a three-story residence, size 30 by 73 feet; to cost \$15,000; it will be of green brick for the basement, and above of brown brick; have hardwood interior, hot-water heating and electric light. For Mrs. E. K. Boyd, at Fifty-seventh street, corner of Monroe street, a six-story apartment house, of pressed brick and stone front, hardwood finish, steam heat, elevator, electric light, marble, mosaic and tile work; cost \$50,000. For Van Craenenboeck, on Monroe avenue, near Fifty-fifth street, a three-story flat building, 40 by 80 feet in size; to cost \$16,000; pressed brick and stone, and copper bays, gravel roof, electric light, steam heat, etc.

Architect Oscar Cobb: Making plans for three-story building, 76 by 162 feet in size; to cost \$75,000; to be erected at New Orleans; it will contain a theater to accommodate 25,000 people; electric light, steam heat, tin roof, etc.

Architect Perley Hale: For C. M. Hamilton, on Champlain avenue near Forty-eighth street, a two-story and attic residence, of rockfaced brownstone front, with copper bay and cornice, gravel roof, stained, plate and beveled glass, furnace.

Architects Dahlgren & Lievendahl: For Mr. Van Housen, at Wrightwood avenue near Clark street, a three-story flat building, of pressed brick and brownstone front, gravel roof, stained, plate and beveled glass, furnaces, etc.

Architect F. Foehringer: For M. Brennan, corner of Garfield avenue and Dayton street, a three-story and basement flat building, of St. Louis pressed brick and Portage variegated brownstone, with galvanized iron bays and cornices, stained and plate glass. Also making plans for three-story and basement flat building, to be erected on Belden avenue near Sheffield avenue; Bedford and brownstone front, gravel roof, stained, plate and beveled glass, heating apparatus, etc.

Architect August Bessler: For M. Offen, on Fairfield avenue near Twelfth street; a three-story flat building of St. Louis pressed brick and Bedford stone front. For A. Barry, twenty frame cottages, to be erected at Evanston. For John Grabow, on Thirteenth street near Wood, a three-story flat building of pressed brick and stone front.

Architect L. G. Hallberg: For O. M. Carson, on Deming court near Clark street, five three-story residences 100 feet frontage by 63 feet deep; stone fronts, gravel roofs, plate and beveled glass, furnaces; cost \$30,000. For himself, on Clark street near School street, four three-story store and flats of pressed brick and stone; to cost \$20,000.

Architect George H. Borst: For M. L. Wheeler, on Woodlawn avenue between Forty-sixth and Forty-seventh streets, a three-story and basement residence; 35 by 61 feet in size; to cost \$20,000; stone front, pressed brick side and rear, steam heat, etc.

Architect Fred. Ahlschlager: For Chris Guderyahn, a four-story and basement store and flat building, of St. Louis pressed brick and buff Bedford stone; cost \$12,000; corner of Sixty-third and Green streets. For James C. Daly, at 4506 State street, a three-story store and flat building, of stone front; to cost \$15,000.

Architect Francis J. Norton: For M. Reich, of Englewood, a block of stores and flats, 125 by 65 feet; to cost \$58,000. On Fifty-ninth street and Tracy avenue, pressed brick and Bedford stone, copper bays, plate and beveled glass, marble work, etc.

Architect W. D. Cowles: For E. D. Murray, on Cottage Grove avenue and Seventy-first street, remodeling flat building into a three-story hotel; pressed brick and shingles, steam heat; cost \$25,000; making plans.

Architects Small & Bishop: For John Byrne, on Dickey street, between Sixty-third and Sixty-fourth streets, a three-story and basement flat building; size 50 by 80 feet; of pressed brick and stone, gravel roof, steam heat, etc.

Architects Ostling Brothers: For C. F. Johnson, on Park avenue, north of Diversey, five three-story residences of rockfaced stone fronts, red oak finish, slate mansard, furnaces, etc.; cost \$35,000. For E. T. Benson and Axel Back, two two-story flats of rockfaced stone fronts; cost \$12,000; on Ashland and Perry avenues. For Charles T. Messenger, on Belleplaine avenue, near Perry street, two two-story residences; to have stone fronts, hardwood finish, furnaces; cost \$10,000.

Architect J. C. Brompton: For Frank J. Gallagher, at Sheridan Park, Ravenswood, a two-story basement and attic frame residence; stone basement, hardwood interior, steam heat, plate and beveled glass; cost \$8,000. For Mrs. G. Hipple, at Sheridan Park, a two-story frame residence; stone basement, steam heat, etc.; cost \$6,000. For a syndicate, twenty frame houses; cost \$1,200 to \$1,500 each; to be built at West Ravenswood.

Architect Anton Charvat: For Ignatz Luhree, on Twenty-second street near Albany avenue, a three-story and basement store and flat building, 50 by 80 feet, of Bedford stone front, gravel roof, steam heat, electric light, etc.; to cost \$16,000; making plans.

Architects Hetherington & Warner: For E. Horan, a three-story and basement residence, 27 by 60 feet; to have a Bedford stone front, slate and gravel roof, hot-water heating; cost \$10,000; to be erected on Washington boulevard near Garfield Park. For E. H. Fleming, on Ashland avenue and Taylor street, a three-story and basement flat building; to have a Bedford stone front, and cost \$8,000.

Architect Robert Rae: For J. C. Cairnduff & Co., at Winnetka, five two-story frame residences, steam heat, stained, plate and beveled glass, hardwood finish, sanitary plumbing; cost \$8,000 each. For C. M. Bennett, at Fairbury, Illinois, a two-story frame residence; to have steam heat and all improvements and cost \$10,000. For J. P. Mallette & Co., at Eggleston, a two-story double flat

building, stone front and pressed brick on the side, hardwood finish, furnaces, etc.; cost \$15,000. For F. B. Clark, at Forty-second street near Drexel boulevard, a three-story residence, 26 by 68 feet; to have a cut stone front, copper bays, steam heat, and cost \$15,000. For C. H. Caldwell, at Winnetka, a two-story residence; to have a stone basement, hardwood finish, stained, plate and beveled glass, steam heat; cost \$10,000.

Architects Adler & Sullivan: For J. W. Oakley, corner of La Salle avenue and Michigan street, a seven-story warehouse, 101 by 114 feet; of pressed brick and stone, steam heat, elevators, electric light.

Architect Gottfried Thiel: For Casper & Molter, a three-story and basement store and flat building, 40 by 80 feet; of St. Louis pressed brick and Bedford stone; cost \$15,000; to be erected at 1584 Milwaukee avenue. For Messrs. Klage & Ludwig, on Fullerton avenue, two two-story store and flat buildings. For J. C. Burgwardt, a four-story and basement store and factory, 48 by 80 feet; of pressed brick and stone front; to cost \$12,000. For Theo. Gribi, at Elgin, a two-story flat building, 115 feet front by 60 feet deep; pressed brick and stone; cost \$24,000; now taking estimates.

Architects J. M. Van Osdel & Co.: For J. W. Ellsworth, a fourteen-story office building, size 75 by 68 feet; to have a front of pressed brick, stone and terra cotta, electric light, steam heat, marble and tile work; cost \$250,000.

Architect F. B. Abbott: For A. S. Hall, on Washington avenue, between Fifty-fifth and Fifty-sixth streets, a two-story and basement stone and frame residence, to have hot-water heating, electric light; cost \$10,000.

Architect W. J. Van Kenren: For S. A. Rothermel, at Oak Park, six two-story residences; to have pressed brick and stone fronts, gravel roofs, stained, plate and beveled glass, electric light, furnaces, etc.

Architect John Duncau: A six-story and basement apartment house, 38 by 150 feet, to be erected on Drexel boulevard and Forty-first street; Bedford stone front, steam heat, elevator, electric light, marble and tile work, hardwood finish throughout; cost \$90,000.

Architect Hugh Copeland: For S. N. Peterson, on Union street near Milwaukee avenue, a five-story factory, 55 by 125 feet, of pressed brick; gravel roof, steam heat, electric light, elevator; cost \$20,000.

Architect J. E. O. Pridmore: For Mr. Tabor, a three-story and basement flat building of rockfaced Kasota pinkstone front, gravel roof, plate and stained glass, hardwood finish, steam heat, electric wiring; to be erected on Evans avenue between Forty-eighth and Forty-ninth streets. Also making plans for a two-story basement and attic residence, of frame, with stone basement, hardwood interior, furnace, etc., to be erected at Morgan Park.

Architect W. R. Gibb: For Fitts & Gerber, a three-story store and flat building, 50 by 71 feet, to be of buff pressed brick and stone; cost \$14,000; to be erected at 1745 West Twelfth street.

Architect J. V. Benes: For David Payne, at Austin, a two-story, basement and attic frame residence; stone basement, first story of buff Bedford stone, stained, plate and beveled glass, hot-water heating, etc.; cost \$20,000.

Architects W. W. Boyington & Co.: For C. E. Manierre, a three-story residence, 24 by 65 feet, of stone and Roman tile, steam heat, etc.; cost \$11,000. For Mrs. Edith Mitchell, on Oakenwald avenue near Forty-third street, two three-story and basement residences of pressed brick and terra cotta fronts, hardwood finish, furnaces, etc.; cost \$13,000. Also letting contracts for the Gray electric building, 60 by 140 feet, three stories, to be erected at Highland Park.

Architect W. S. Burrows: For Charles Sigler, at Cedar Lake, Indiana, a three-story frame hotel; to cost \$25,000; making plans. For W. Goodwin, on Stony Island avenue and Sixty-seventh street, three two-story frame residences; to cost \$12,000.

Architect Frank Randak: For D. Davis, on Halsted near Twelfth, a four-story store and flat building, of stone front front; cost \$14,000.

Architect J. M. Emmons: For Mrs. Laura A. Brown, at Woodlawn and Myrtle avenues, a three-story flat building of Bedford stone front, steam heat, gas ranges, etc.; cost \$20,000.

Architect L. B. Dixon: For George Sunderland, on Forest avenue near Thirty-seventh street, five three-story residences; to have buff Bedford stone fronts, stained, plate and beveled glass, furnaces; cost \$30,000.

Architects Blitz & Marshall: A three-story flat building on University Place and Cottage Grove avenue, pressed brick and granite, copper cornice, hot-water heating; cost \$16,000.

Architect Oliver W. Marble: For himself, on Drexel boulevard near Forty-second street, a three-story residence of stone front, tile roof, hot-water heating, electric light, gas ranges, etc.; cost \$20,000.

Architects Wilson & Marble: For A. W. Hester, at Roslyn Place, two three-story residences, of Bedford stone front, hardwood finish, furnaces; cost \$20,000. For W. H. Pruy, on Ellis avenue near Forty-sixth street, four three-story residences, to have stone fronts; cost \$60,000; making plans.

Architects Beman & Parmentier: For J. T. Fish, at Downers Grove, a three-story frame residence; hot-water heating, etc.; cost \$10,000. For W. I. Beman, on Fifty-fifth street and Washington avenue, three residences; cost \$15,000. For Barker & Wyman, at Waukegan, twelve two-story frame houses; cost \$20,000.

Architect Jules De Howarth: For August Van Buren, at 344 Madison street, a four-story store and flat building; stone front; cost \$16,000. For Williams & Co., corner of Aberdeen and Taylor streets, a four-story flat building of pressed brick and stone; cost \$35,000. For W. H. Dawn, near Sheridan Drive, two residences; to have steam or hot-water heating; cost \$30,000.

Architects Park & Purcell: For C. H. Weller, on Vernon avenue, between Thirty-seventh and Thirty-eighth streets, three-story store and flats; of Bedford stone front, stained, plate and beveled glass; cost \$18,000.

Architects J. F. & J. P. Doerr: For W. J. Doerr, on Dearborn street, near Twenty-fourth street, a four-story flat building; of Bedford stone front; cost \$15,000. For M. Kohn, on Thirty-fifth street, near Stanton avenue, a three-story store and flat building; of pressed brick and stone; cost \$10,000. For John O'Hare, on Twenty-eighth and Butler streets, a three-story store and flat building; cost \$14,000.

Architect Thomas Hawkes: A four-story addition and remodeling building, at 1519 and 1521 Wabash avenue; pressed brick and stone, gas ranges and fireplaces, steam heat, etc.; cost \$25,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall.—Architect James W. McLaughlin reports plans for the Deutsches Altenheim, Gustave Tafel, president. It is to be a well-arranged building, built of brick and three

stories high; materials: pressed brick, stone, slate roof, blinds, gas, plumbing, steam heat, etc.; cost \$60,000.

Architects Crapsey & Brown have drawn plans for a chapel for Center College, Danville, Kentucky; size 60 by 130, three stories high; materials: pressed brick, stone trimmings, slate roof, blinds, gas, plumbing, seats, hardwood finish, etc.; cost \$23,000. They have also prepared plans for a schoolhouse at Danville, Kentucky; materials: brick, stone, tin roof, school fixtures, gas, furnace and plumbing; cost \$15,000.

Architects Nash & Plympton have prepared plans for a residence for Mrs. J. S. Cook, Cincinnati; materials: pressed brick, hardwood finish, gas, plumbing, mantels, stained glass, furnace, laundry fixtures, slate roof, etc.; cost \$10,000.

Architect J. H. Boll reports for Mrs. Rose Bussing, Walnut Hill, Cincinnati, a residence; materials: pressed brick, stone, slate roof, mantels, grates, plumbing, gas, stained glass, etc.; cost \$4,500.

Architect W. S. Robinson reports for Mr. F. B. Drexilius, Cincinnati, a residence; materials: frame, slate roof, pine finish, mantels, grates, furnace, stained glass, gas, plumbing, etc.; cost \$1,500.

Architects Aiken & Ketchum report for Mr. O. E. Peters, a residence; materials: pressed brick, stone trimmings, slate roof, blinds, grates, furnace, mantels, gas, plumbing, stained glass, etc.; cost \$10,000.

Architect W. W. Franklin has drawn plans for four double houses, for Mr. Henry Pogue, Cincinnati; materials: pressed brick, stone trimmings, slate roof, blinds, mantels, furnace, stained glass, gas, plumbing, etc.; cost \$40,000. Also, for Mr. H. D. Rossiter, a residence; materials: frame, slate roof, blinds, furnace, gas, plumbing, stained glass, etc.; cost \$3,500. Also for Walter S. Fisher, Gano and Walnut streets; materials: pressed brick, slate roof, hardwood, blinds, gas, plumbing, stained glass, etc.; cost \$8,000.

Architects De Jardins & Hayward have prepared plans for a residence for Mr. A. L. Stix; materials: frame, slate roof, blinds, gas, stained glass, plumbing, hardwood mantels, furnace, etc.; cost \$10,000.

Architect J. J. Rueckert has prepared plans for Benj. B. Dale; materials: frame, slate roof, hardwood finish, stained glass, plumbing, gas, mantels, etc.; cost \$6,000.

Architect G. W. Drach has prepared plans for a residence for Simeon Johnston; materials: frame, slate roof, blinds, gas, plumbing, stained glass, mantels, furnace, etc.; cost \$6,000.

Architect E. Anderson has prepared plans for a residence for G. W. Trowbridge, Maplewood, Ohio; materials: frame, slate roof, blinds, mantels, grates, stained glass, furnace, plumbing, etc.; cost \$5,000.

Architect H. E. Siter reports for the village of Avondale a schoolhouse; materials: brick and stone, slate roof, hardwood, gas, plumbing, seats, blackboards, and furnaces. This will be a most complete building; cost \$30,000.

Little Rock, Ark.—Architects Rickon & Thompson: An eight-room, two-story schoolhouse, brick, on Twenty-first and Collins streets; cost \$20,000; W. D. Holtzman, contractor. For Hot Springs County, a two-story brick jail at Malver, Arkansas; cost \$10,000.

Milwaukee, Wis.—Architect H. C. Koch, for J. E. Patton & Co., a six-story block; stone, with terra cotta trimmings; size 132 by 219 feet; to cost about \$100,000.

Pittsburgh, Pa.—Architect F. J. Osterling: for P. Eichenlaub, a two-story residence; size 38 by 64 feet; brick, slate roof; cost \$6,200.

Architects Bickel, Thomas Boyd, F. J. Osterling and W. S. Fraser, from this city, have submitted plans for the Carnegie library competition.

The Liquid Carbolic Acid Company will erect a two-story frame factory, 30 by 70 feet; cost \$10,000. W. F. Gardner will build a two-story dwelling, brick and slate roof; 30 by 46 feet; cost \$6,500. W. M. Laird, a two-story brick residence; 80 by 46 feet; cost \$7,500. The Rev. T. H. Chapman will build a two-story dwelling, size 29 by 33 feet; brick, with slate roof; cost \$5,000.

Rochester, N. Y.—Architects Jay Fay and O. W. Dryer have prepared plans for block at Seneca Falls, New York; to be 100 feet front by 50 feet deep, and to contain five stores with flats above; materials, brick, with stone trimmings, tin roof; cost \$13,000. Also for Mr. E. Warren, Medina, New York, a residence; to be of brick; cost \$5,000. Also plans for the Memorial Presbyterian Church, to be built in this city; materials, brick and stone, with slate roof; size 80 by 100 feet, with a total seating capacity of 1,700, Sunday school 900, auditorium 800; stained glass; for ventilation, exhaust fan; heating and lighting systems undecided; probably pipe organ; cost \$25,000. Also designs for an Epworth League Hall for the Methodist Assembly, at Silver Lake, New York; Saracenic designs, copied from Great Mosque at Ispahan; size 60 by 140 feet, two stories, frame and cement. Also for "Children's Temple" for the Methodist Assembly at Silver Lake, New York; designed after the Pantheon at Rome; main building 66 feet in diameter, porch in proportion; seating 900; frame and cement. For Mrs. Perry, double house; cost \$3,500. For Mr. Ebenezer Grimbale, a brick factory building; two stories, 26 by 78 feet; cost \$5,000. For Mr. Rawley Farron, repairs on two blocks; making one into public hall; tin roof, slate gables; the other, new fronts and top story; tin roof, slate mansard; cost \$3,000.

Architect George W. Hutchinson has made plans for residence for Mr. William T. Homaday, Buffalo, New York; first story, brick and Medina stone; second story frame, hardwood finish, two bathrooms; cost \$7,000.

St. Louis, Mo.—The J. B. Legg Architectural Company have prepared plans for George Diehl, Waco, Texas, a two-story residence, size 40 by 60 feet; frame, stone foundations; cost \$6,000. Also for Mrs. A. L. Swart, a two-story brick residence, size 30 by 55 feet; cost \$10,000. Also a two-story school building, to be erected at St. Genevieve, Missouri, size 65 by 68 feet; to cost \$20,000.

A \$2,000,000 hotel is now proposed in St. Louis, the site having been purchased by a syndicate of capitalists at a cost of \$750,000. It is to be on the site of Pope's Theater, Ninth and Olive streets. The syndicate have not, as yet, decided on dimensions, architectural details, etc.

Architect G. B. Reid: For W. J. Doyle, a two-story pressed brick dwelling; size 50 by 47 feet; cost \$6,500.

Architect Henry E. Roach: For M. Forestel, a three-story store and flat building; size 104 by 66 feet; brick, stone foundation; cost \$20,000.

Architects James Stewart & Co.: For Charles B. Adams, a three-story residence, frame, stone foundations, shingle roof; size 40 by 42 feet; cost \$6,000.

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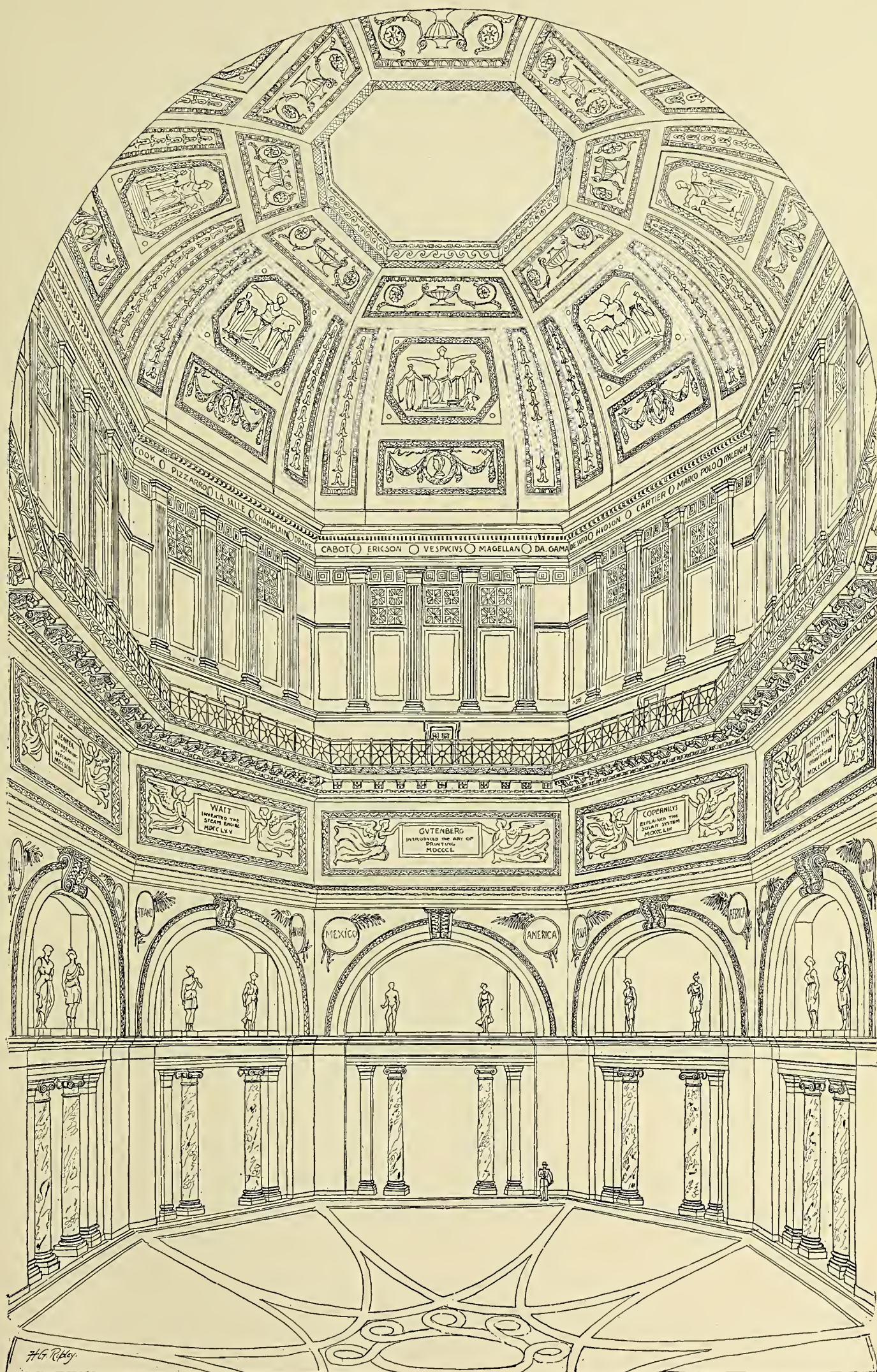
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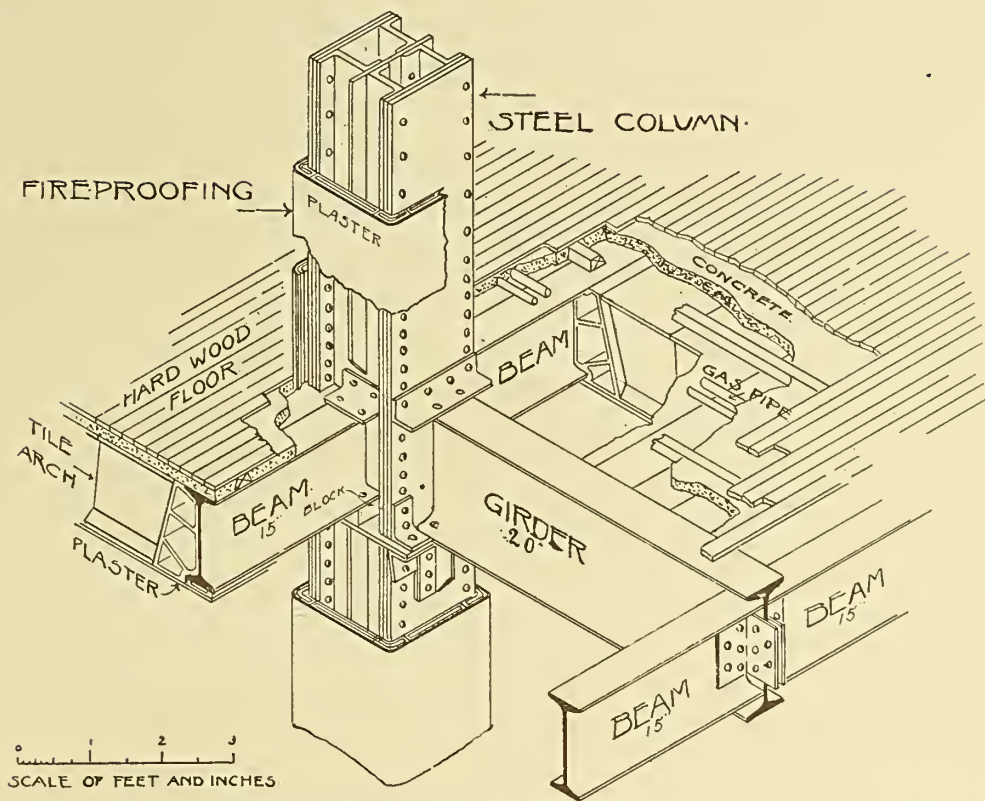
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No. 115 Monroe Street, CHICAGO.

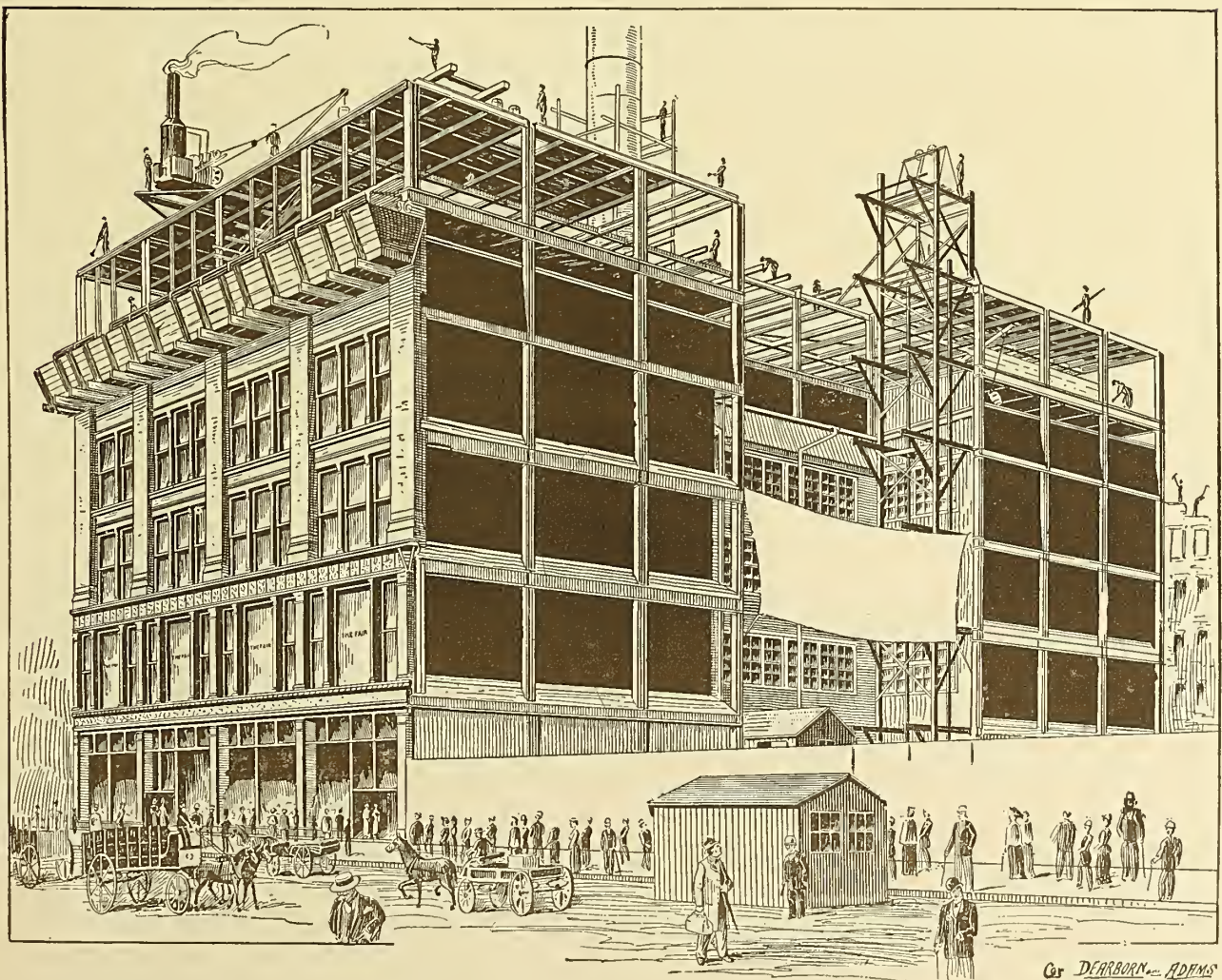


VIEW IN INTERIOR OF ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO,
DEPARTMENT OF CONSTRUCTION, NOVEMBER, 1891.

R. M. HUNT, ARCHITECT, NEW YORK.

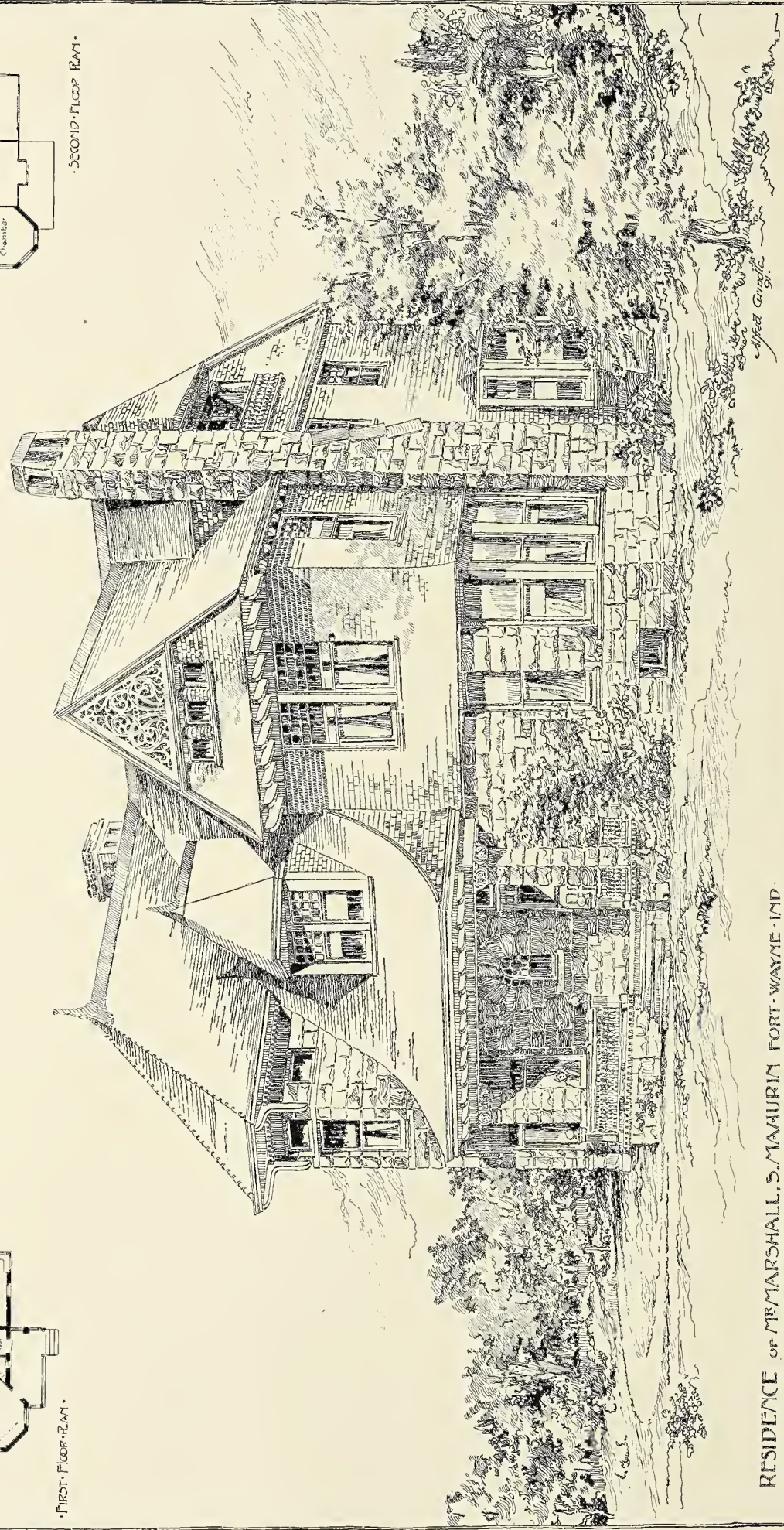
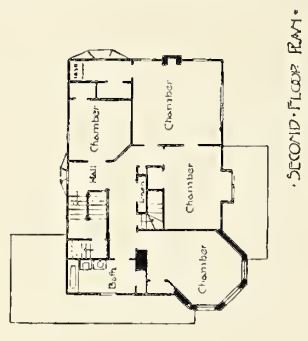


ISOMETRIC VIEW
OF AN
INTERIOR COLUMN
THE FAIR.
DEARBORN, ADAMS AND STATE STREETS
CHICAGO.



VIEW OF CONSTRUCTION OF "THE FAIR" BUILDING, CHICAGO.

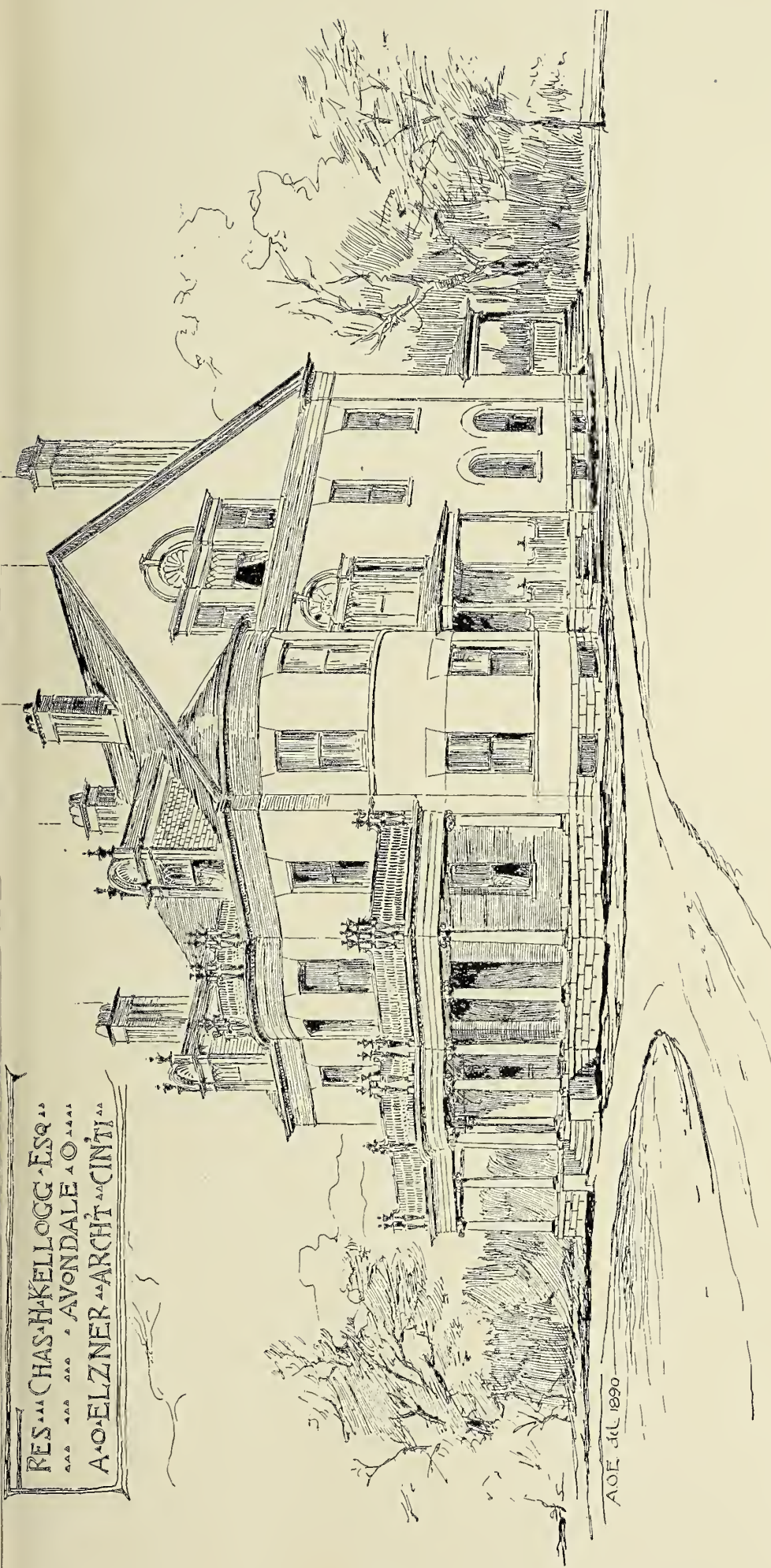
Illustrating Paper by W. L. B. JENNEY, Architect, published in this number.



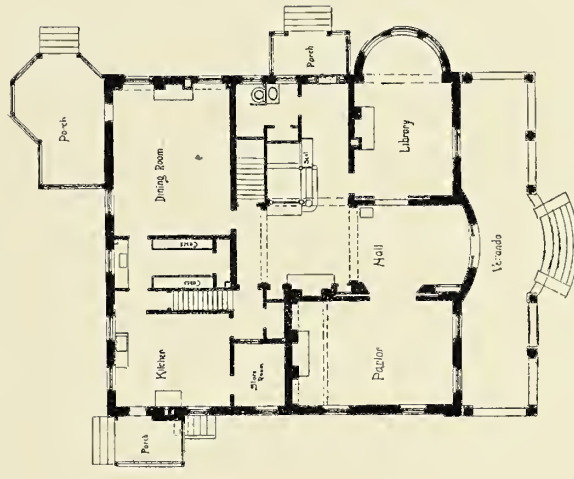
RESIDENCE OF MR. MARSHALL S. MAHURIN, FORT WAYNE, IND.
- WING AND MAHURIN ARCHITECTS -

Wing and Mahurin

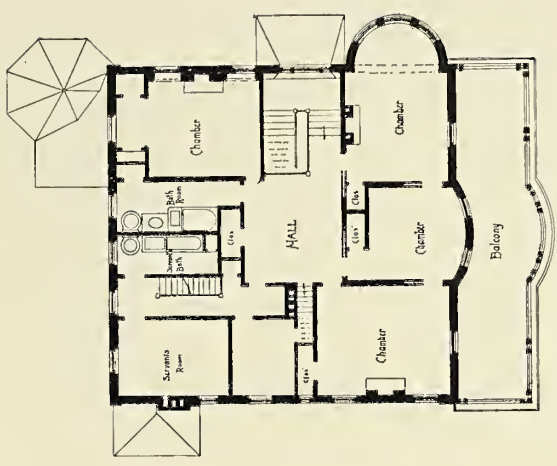
RES. CHAS. H. KELLOGG, ESQ.,
 AVONDALE, O.
 A. O. ELZNER, ARCHT., CINTY.



AOE. JUL 1890



First Floor Plan

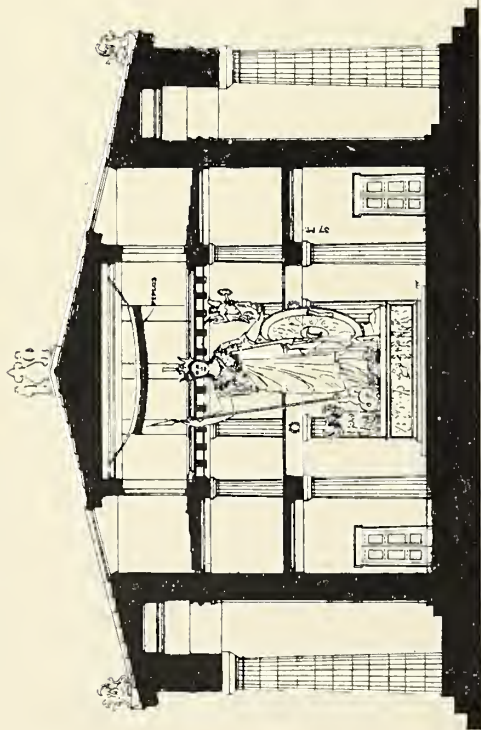


Second Floor Plan

1

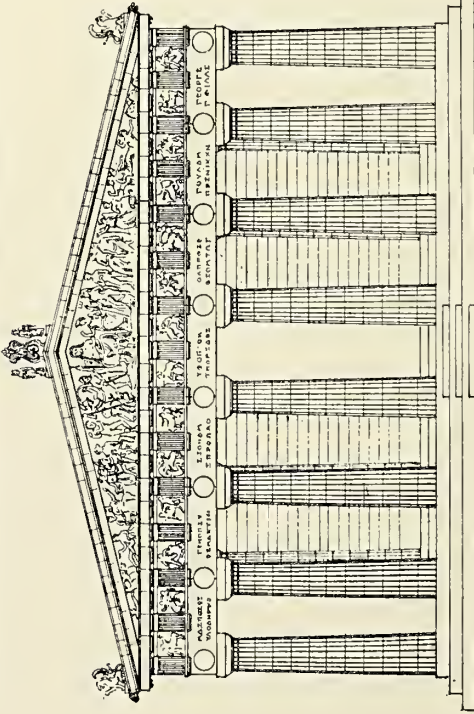
CLARK MEDAL COMPETITION ADCCCXCI • THE PARTHENON
SUBMITTED BY "FAIR GREECE! SAD RELIC OF DEPARTED WORTH!"

SCALES { PLAN AND LONGITUDINAL SECTION 20 FT TO 1 INCH
ELEVATION AND TRANSVERSE SECTION 15 FT TO 1 INCH



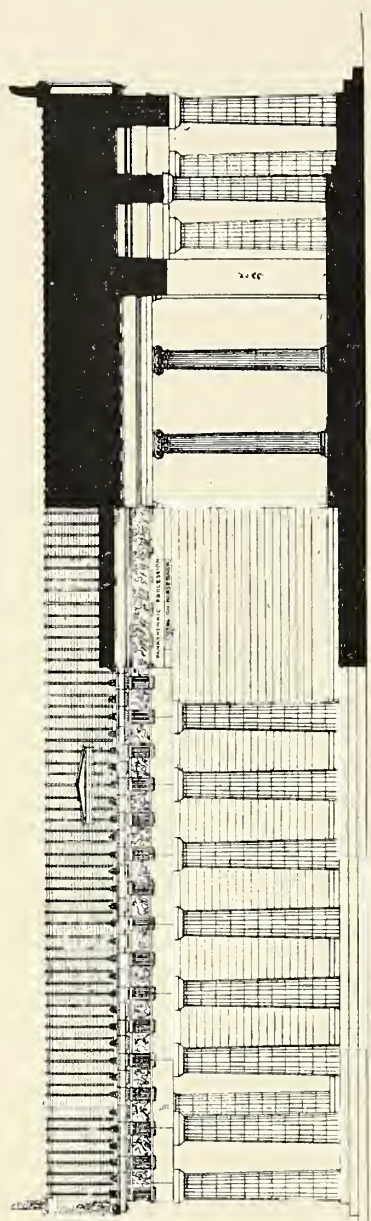
TRANSVERSE SECTION "A.A."

THIS SECTION IS CONSTRUCTED IN HARMONY WITH FERGUSON'S THEORY OF LIGHTING, CRETE, AND BACCHAN TEMPLES AS BEING MOST CONSISTENT WITH THE GENERAL ARRANGEMENT OF THE DIANITY, ARCHITECTURAL EFFECT AND CRETEAN INGENUITY. ALL PURELY CONJECTURAL PARTS ARE OMITTED ENTIRELY FOR CLARITY AND DIGNITY BECAUSE THEY ARE PURELY CONJECTURAL. HENCE, NEITHER RAILING STAIR NOR GULLS ARE SHOWN NOR HAS ANY ATTEMPT BEEN MADE TO SHOW THE DESIGN OF THE THIRD STORY NON RECOFF. THE LATTER MIGHT HAVE EITHER A FLAT CEILING OR AN OPEN TIMBER ROOF AS SUGGESTED BY FERGUSON. EITHER WOULD AFFORD SUITABLE HANGING FOR THE PERIODS AND COULD BE MADE TO HAVE A GOOD ARCHITECTURAL EFFECT. THE COLUMNS ARE SHOWN THE HEIGHT FIGURED AS BEING IN PROPORTION WITH THE EXTERIOR. THAT THE LOWER TIER AT LEAST WERE OF THE DORIC ORDER IS CONSIDERED AS SETTLED BY THE DISCOVERY BY A FACIARD OF TRACES OF THE FLUTINGS ON THE SLABS ON WHICH THEY RESTED. MINERVA IS AFTER THE RESTORATION OF QUATREMERIE DE QUINCY

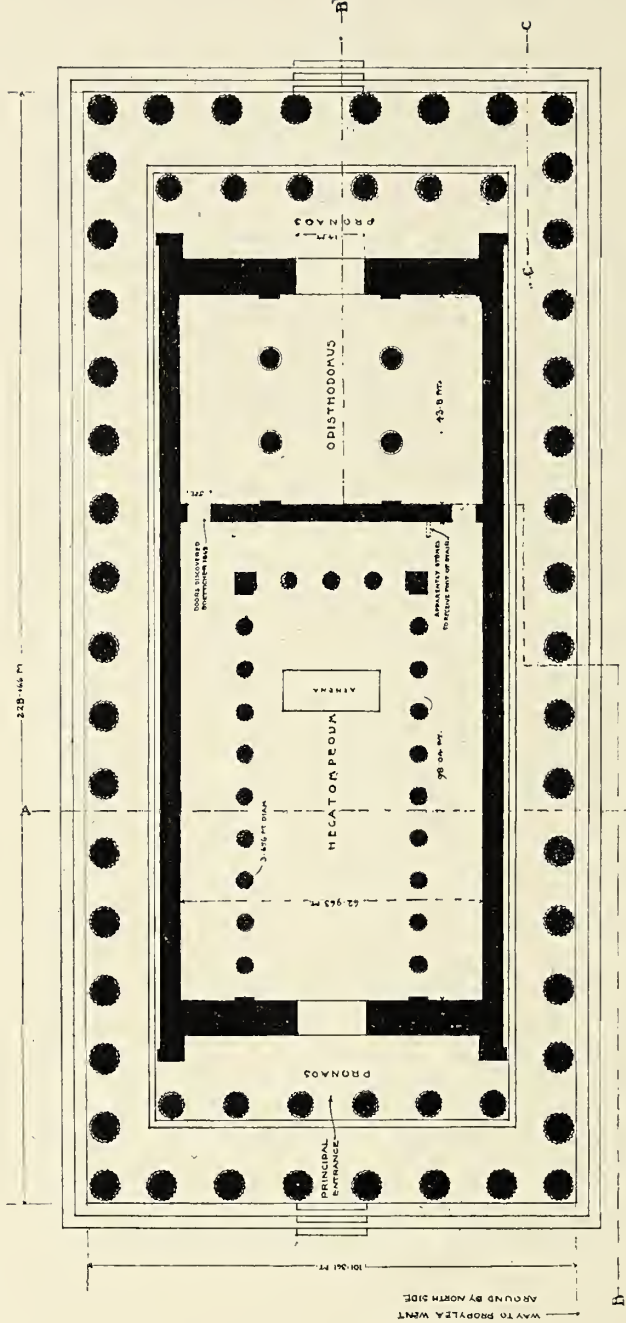


EAST ELEVATION

THE ARRANGEMENT OF SHIELDS ON THIS ELEVATION MAY BE IN A SLIGHT DEGREE ARBITRARY THEY ARE ACCORDING TO STUART WHO SHOWS HOLES IN THE ARCHITRAVE WHICH JUDGING FROM THE CIRCULAR PATCHES OF LIGHT COLOURED MARBLE AROUND THEM WERE FOR SOME JOHN PURPOSE. THERE ARE TRACES OF A CORRESPONDING DECORATION ON THE OTHER FRONT AND SIDES



LONGITUDINAL SECTION "B.B."



PLAN

THE PARTHENON (ERECTED BC 454) STOOD ON THE SOUTH SIDE OF THE ACROPOLIS A LITTLE TO THE EAST OF THE CENTER ON THE SITE OF THE HIKATOPREONAS DESTROYED BY XERXES BC 480. IT EXTENDED 307 FT BEYOND THE OLD TEMPLE TO THE WEST AND THE WIDTH WAS ALSO GREATER. THE PRINCIPAL ENTRANCE WAS TOWARDS THE EAST. I.E. THE END FURTHEST FROM THE PROPYLEA THE ENTRANCE TO THE ACROPOLIS

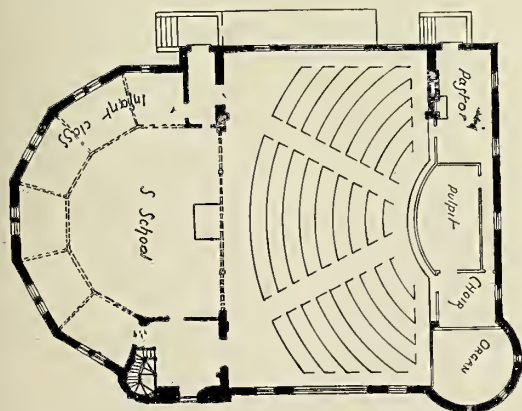


VIEW IN RESIDENCE OF THOS. H. WILLIAMS, JERSEY CITY, N. J.



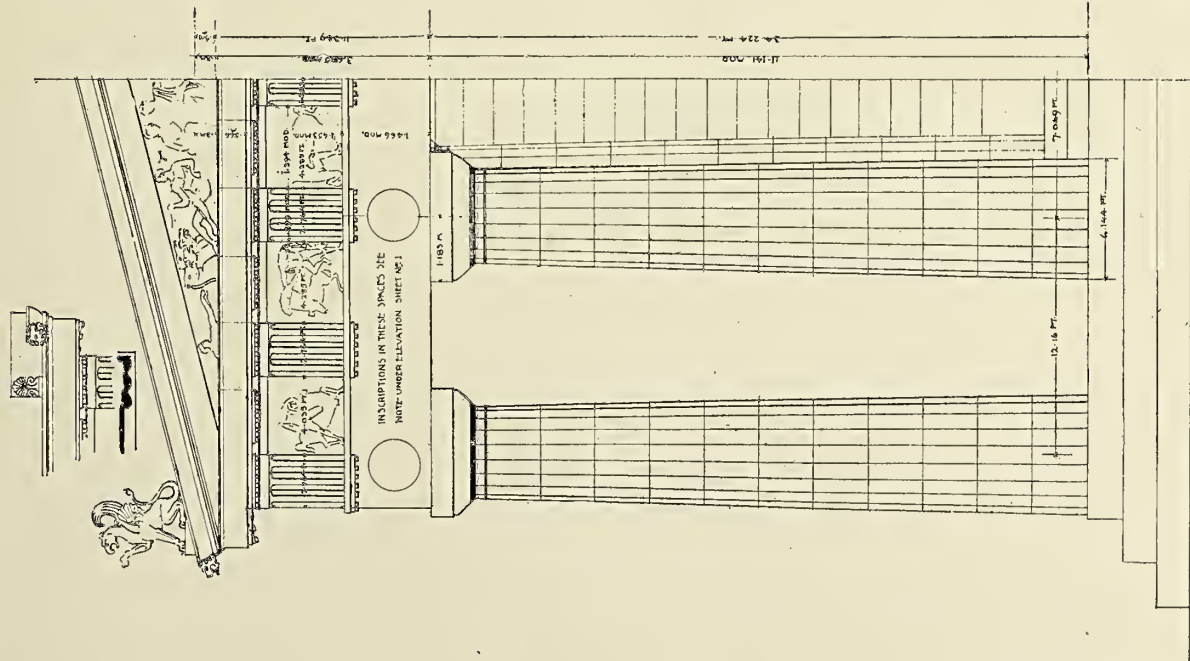
METHODIST EPISCOPAL CHURCH, CLIFTON, OHIO.

CRAPSEY & BROWN, ARCHITECTS, CINCINNATI, OHIO.

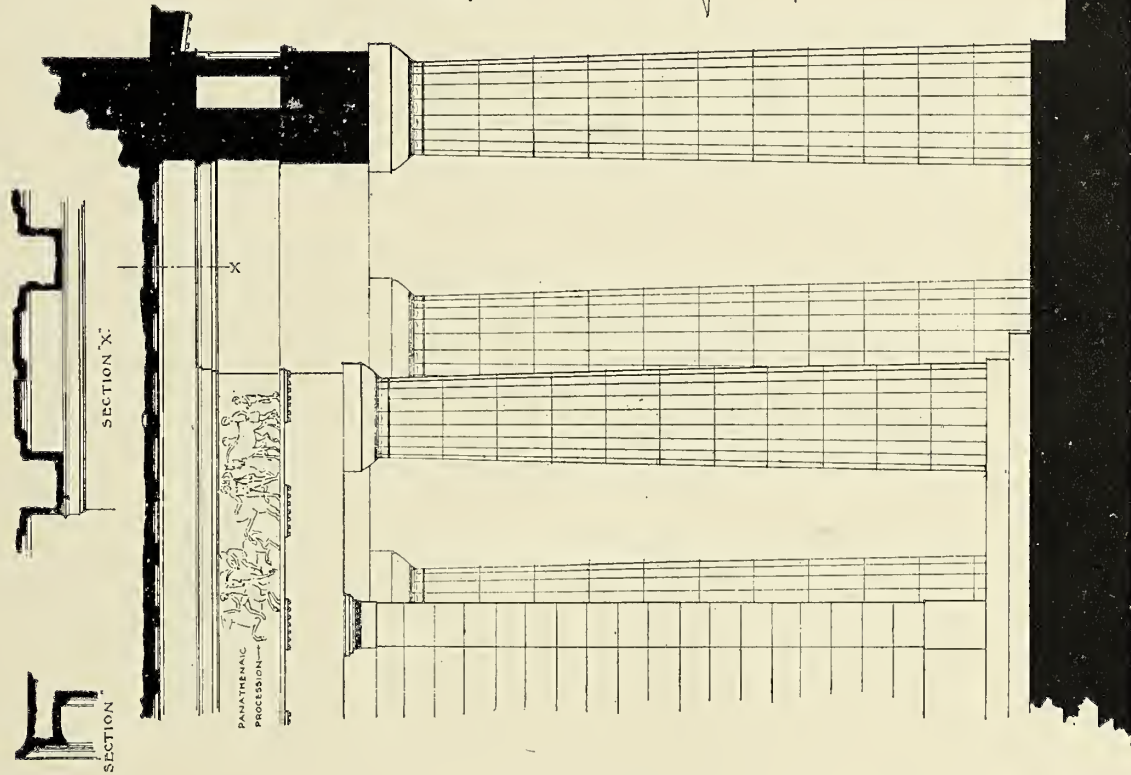


CLARK MEDAL COMPETITION MDCCCXCI • THE PARTHENON
SUBMITTED BY FAIR GREECE! SAD RELIC OF DEPARTED WORTH!

SCALE 5 FT. TO 1 INCH
SCULPTURE BELOW IS NOT DRAWN TO SCALE



CORNER OF EAST ELEVATION
FIGURES ARE IN FEET AND MODULES TO 3 DECIMALS
THE MINUTIA IS NOT PRETENDED TO BE FIGURED



SECTION C.C. SHEET No 1
ENTASIS AND CURVES IN GENERAL ILLUSTRATED BY PENROSE
'PRINCIPLES OF ATHENIAN ARCHITECTURE'.



SECTION X



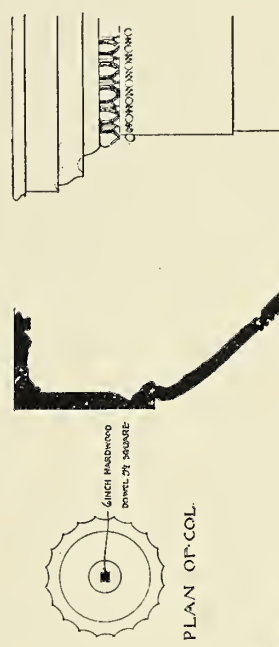
METOPES FROM ELGIN COLLECTION IN BRITISH MUSEUM
THERE ARE IN THIS COLLECTION TAKEN FROM THE SOUTH SIDE - THEY ARE THE
BEST PRESERVED AND ILLUSTRATE THE FIGHT BETWEEN THE LAPITHS AND CENTAURS
AT THE MARRIAGE FEAST OF PERITHOOS (HIGH RELIEF)



CENTRAL PORTION OF FRIEZE IN EAST ELEVATION
THIS FRIEZE ILLUSTRATES THE PANATHENAIAC FESTIVAL PROCESSION IN HONOR
OF ATHENA - THERE IS ABOUT 400 FT. IN THE ELGIN ROOM (LOW RELIEF)



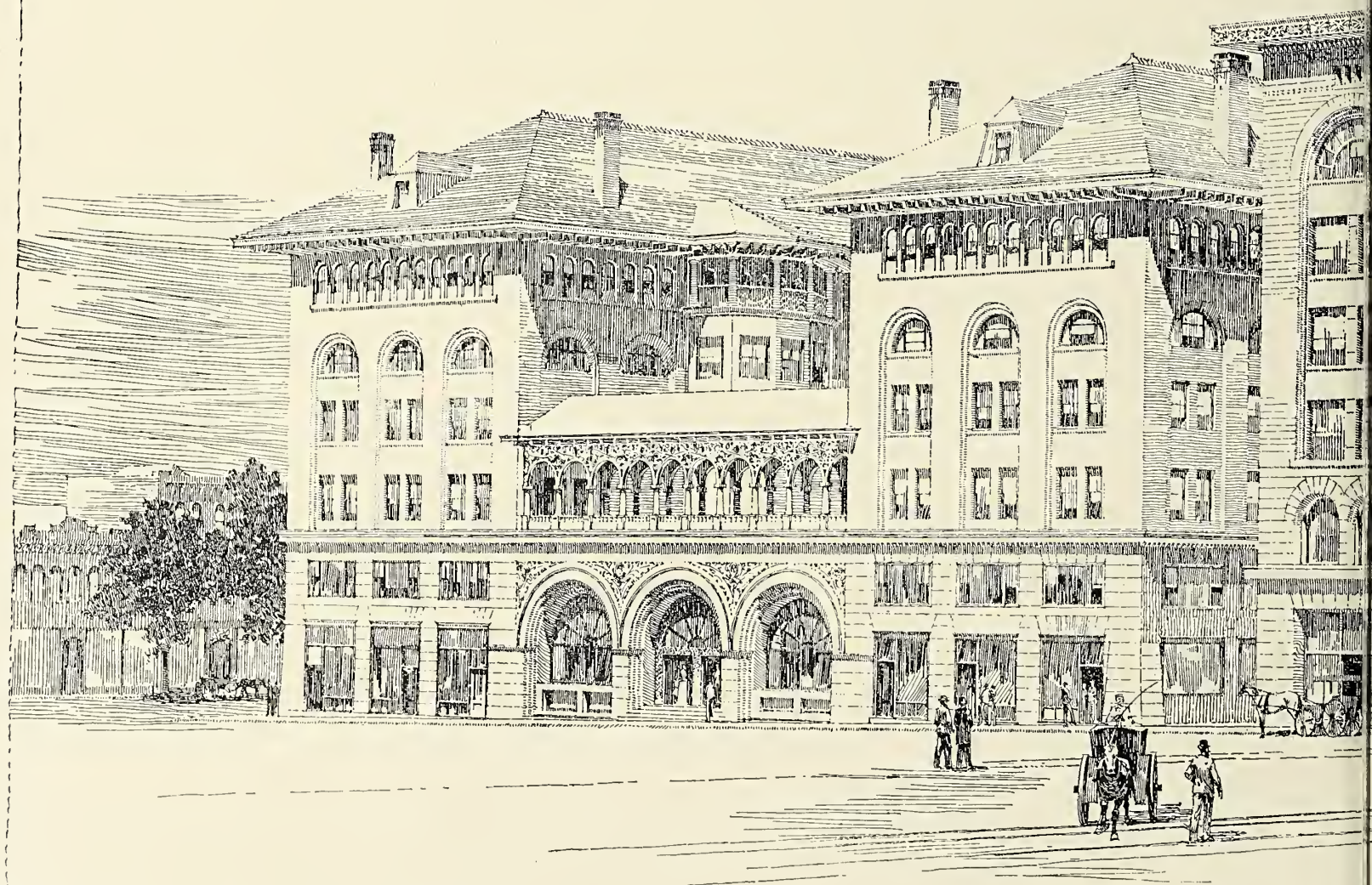
WESTERN PEDIMENT
THE EASTERN PEDIMENT ILLUSTRATES THE BIRTH OF ATHENA - THE WESTERN
HER SUCCESSFUL CONTEST WITH POSEIDON FOR THE POSSESSION OF ATTICA

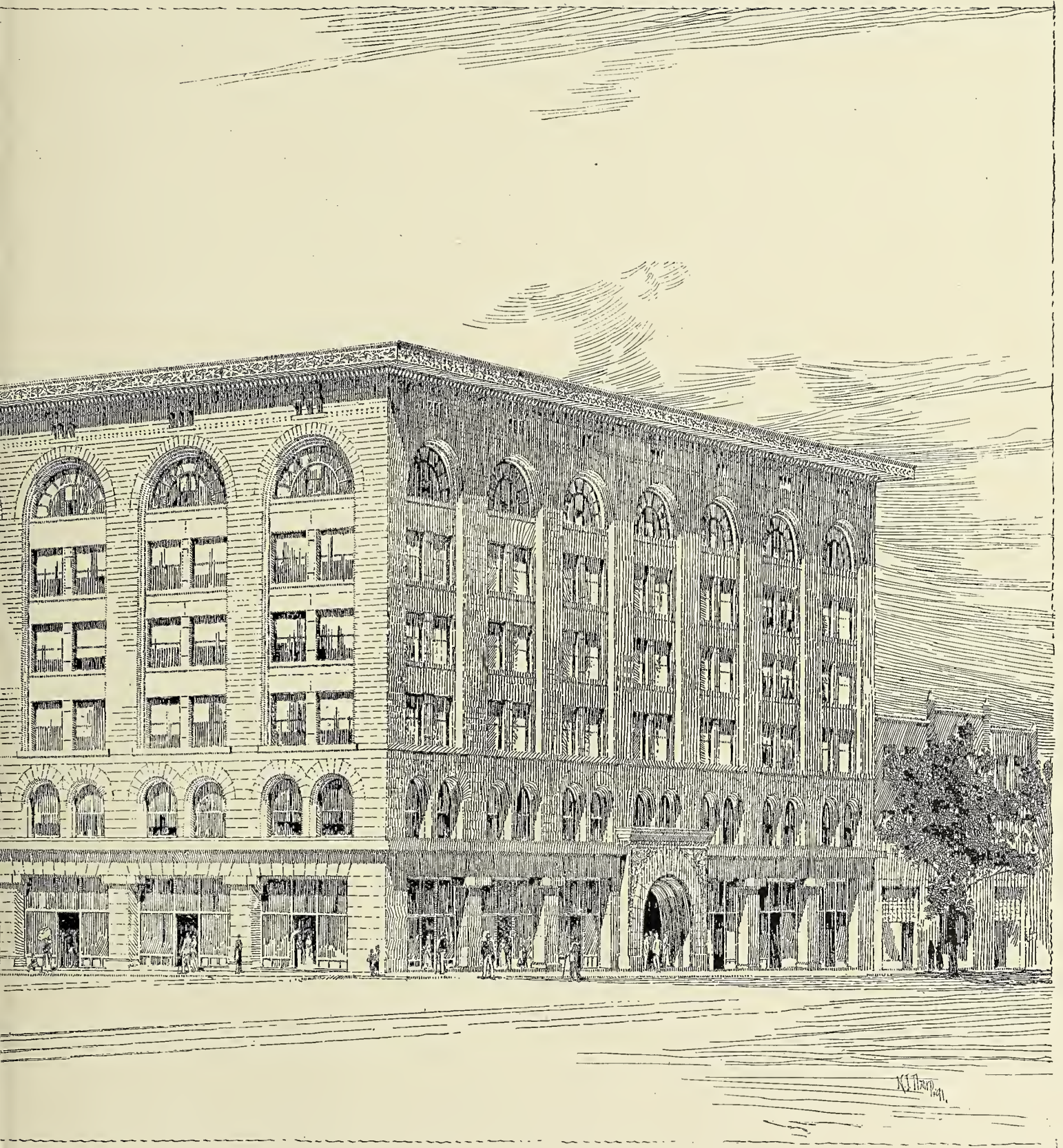


PLAN OF COL.

THE POOLY-BLOCK AND HOTEL ONTARIO.
SALT-LAKE-CITY-VTAN.

ADLER AND SULLIVAN
ARCHITECTS. CHICAGO. ILL.





THE POLY-LOCK AND HOTEL ONTARIO.
SALT LAKE CITY, UTAH.

ADLER AND SULLIVAN
ARCHITECTS. CHICAGO, ILL.



THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

DECEMBER, 1891.

No. 5

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to
ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photo-gravures), 75c. Intermediate number, 10c. Advance payment required.

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STANDING COMMITTEES FOR 1892.	
Committee on Foreign Correspondence: Richard M. Hunt, chairman, New York, N. Y.; William Le Baron Jenney, Chicago, Ill.; Dankmar Adler, Chicago, Ill.; Charles F. McKim, New York, N. Y.; Henry Van Brunt, Kansas City, Mo.	
Committee on Education: Professor Russell Sturges, chairman, New York, N. Y.; Professor William R. Ware, New York, N. Y.; Professor N. Clifford Ricker, Champaign, Ill.; T. M. Clark, Boston, Mass.; Professor C. Francis Osborne, Ithaca, N. Y.	
Committee on Code of Professional Ethics: Louis H. Sullivan, chairman, Chicago, Ill.; E. H. Kendall, New York, N. Y.; W. W. Carlin, Buffalo, N. Y.; Henry Van Brunt, Kansas City, Mo.; R. W. Gibson, New York, N. Y.	
Committee on Clerk of Works: R. W. Gibson, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; W. G. Preston, Boston, Mass.; J. W. McLaughlin, Cincinnati, Ohio; J. G. Cutler, Rochester, N. Y.	
Committee on Uniform Contract: O. P. Hatfield, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; Alfred Stone, Providence, R. I.	
Committee upon Conservation of Public Buildings: The presidents of Chapters.	
Committee on Competition Code: (To be appointed by the Board of Directors.)	

The Congress of Architects at the World's Fair.

Almost two months of a possible eighteen have passed since the American Institute of Architects appointed a committee "to make arrangements for a convention of architects representing the entire world," to be convened during the Columbian Exposition at Chicago in 1893. It is time this committee held a meeting and arranged a definite plan of action. A general scheme for exhibits of drawings and models could also be formulated and each architectural society when notified of the congress could have the general plan placed before them, with the request that they form a committee representing their country or section for the collection of exhibits. In this way a large collection could be made and sufficient space allotted to it in one of the art buildings or elsewhere. The time is short, and if anything is to be done it must be done at once or the entire plan given up. The resolution passed by the Institute appointing this committee is as follows:

Resolved, That it is the sense of this meeting that a convention or congress of architects should be arranged for, to take place in Chicago during the World's Fair, and that the arrangements for such a meeting shall be made by a committee on foreign correspondence of this Institute, consisting of five members, as follows: R. M. Hunt, W. L. B. Jenney, D. Adler, C. F. McKim, Henry Van Brunt. The five members of the committee are architects of buildings for the World's Fair and they are known to architects everywhere. We would suggest that before a meeting of the committee is called (which might take place in Chicago when the members are there on World's Fair business) each member formulate the general plan that seems to him most feasible and send it to Mr. Hunt, who is chairman of the committee. After this preliminary work is accomplished the work of the local committee of the Institute, the Illinois Chapter, would be effective.

Necessity for Supporting State Chapters.

In the face of strong and broadly apparent reasons why the state Chapters of the Institute should be supported and active in their work, there has been considerable discussion of the advisability of abandoning the state Chapters. This, too, in two of the largest states in the Institute membership. In one it was with the greatest difficulty that the advocates of this dissolution were persuaded to allow the matter to rest for another year. In the other it will be one of the principal topics for discussion at its next annual meeting. In view of this, the directors should take immediate action upon the resolution presented by Mr. Vost at the last convention of the Institute, which is as follows:

WHEREAS, it is important that the profession, especially the members of this Institute, should perfect such organization as will most effectually combine the influence of its members in every work of importance to the profession, and

WHEREAS, the legislation by the several states sought by the profession can be more easily effected through state organizations and their representatives than through local organizations or no organization, and

WHEREAS, there are many other advantages which may accrue and will accrue from state organizations; therefore,

Resolved, that the Board of Directors be requested to suggest to the several local Chapters such form of state organization as can best unite and uphold the interests of the profession and its members in the several states; and

Resolved, that membership in such state organization shall rest upon the same qualifications as in local Chapters, as laid down by this Institute, and that membership in such state organization shall be accepted as the requisite to membership in this Institute now required in local Chapters.

This is the proper method, and the state Chapters can safely leave the matter in the hands of the directors of the Institute, meanwhile sending them, before the meeting in January, a summary of the reasons given for the abandonment of the state Chapter. In this way a general plan can

be formulated, and the influence of the state Chapter will not be lost when required to push state matters. The main reason urged is that in general the local Chapters in the several cities fill all the requirements of organization, and it is a useless expenditure of money to support the state Chapters, and of time in attending the annual meeting. If there were no state Chapters, a meeting of the architects of a state once a year for the discussion of general affairs would be valuable, and it is upon the vigorous work of the state Chapters that all legislation, both state and national, most largely depends. Therefore, the state Chapters cannot afford to be precipitate in their action at the annual meetings about to be held.

A Superb Journal for Architectural Students. For two years architects and architectural students have been interested in an elegantly presented portfolio issued monthly by the architectural students of the Massachusetts School of Technology, called the *Technology Architectural Review*. It has been ably edited and conducted, and in its prescribed field has done more than was promised in the initial prospectus in presenting the competition and thesis designs of the school for the current year. After the experience gained, it has been decided to widen the field and scope, and now with change of name the first number of *The Architectural Review* is placed before architectural students for approval. Preserving the same general appearance of elegance and finish in dress, the thesis designs therein are added to by measured drawings of European work, and it has increased its literary department by securing an excellent staff of writers. The most notable department, and one that will give it a place among architectural authorities or consign it to the large and well-covered plane of journalistic mediocrity, is that devoted to criticism of contemporaneous work illustrated in other architectural journals. It is a department which we are glad to see established and hope to see supported by the most able among architectural critics. Broadly educational in its aim, eclectic in its policy, the *Architectural Review* has a work before it that reaches into the architectural future of the country — a work that will stimulate a love for the ideal and artistic in a land where a commercial spirit is obtaining too strong an influence upon architectural design.

Important Arbitration of a Strike in London. The arbitration of a dispute between the Central Association of Master Builders of London and the Carpenters' and Joiners' Association by the Royal Institute of British Architects marks a new era, and probably a distinctive advance in the equitable settlement of all disputes between intelligent labor and employers. In 1872 these associations made a specific agreement regarding hours per week, wages per week, overtime, etc. This was in force, with a slight amendment in 1887, until 1890, when a communication was sent by the Carpenters' and Joiners' Association to the employers, submitting a new set of rules for approval. These rules were carefully considered but not agreed to, and in May, 1891, a strike was declared against certain firms, which was followed by a general lockout. Correspondence was finally opened between the Central Association of Master Builders, the London Building Trades Council and the Royal Institute of British Architects, which resulted in an award being issued by the president of the Royal Institute on November 19, 1891. The

original agreement called for 52½ hours' work per week, all the year round, at 9d. per hour; the demand was for 47 hours per week, all the year round, at 10d. per hour; the award was for 51¼ hours for thirty-six weeks in summer and 47 hours for sixteen weeks in winter, equal to an average of fifty hours per week all the year round, and the rate of wages to be 9d. per hour. This intelligent and dignified settlement of a strike is not only worthy of approval, but illustrates how general the disposition is among intelligent workmen to submit their differences to arbitration. In this country the most important arbitration yet made in a similar case was by a judge, who was supposed to be thoroughly unbiased, but who, being a political appointee, and looking to the votes of the people for advancement, the award was not received with that satisfaction and belief in its unbiased quality which must characterize the award made by the Royal Institute of British Architects. With this precedent before us and the experience in the case referred to, the next important arbitration in the building trades will probably be referred to the highest authority, such as the American Institute of Architects, to which no suspicion of biased judgment can reach.

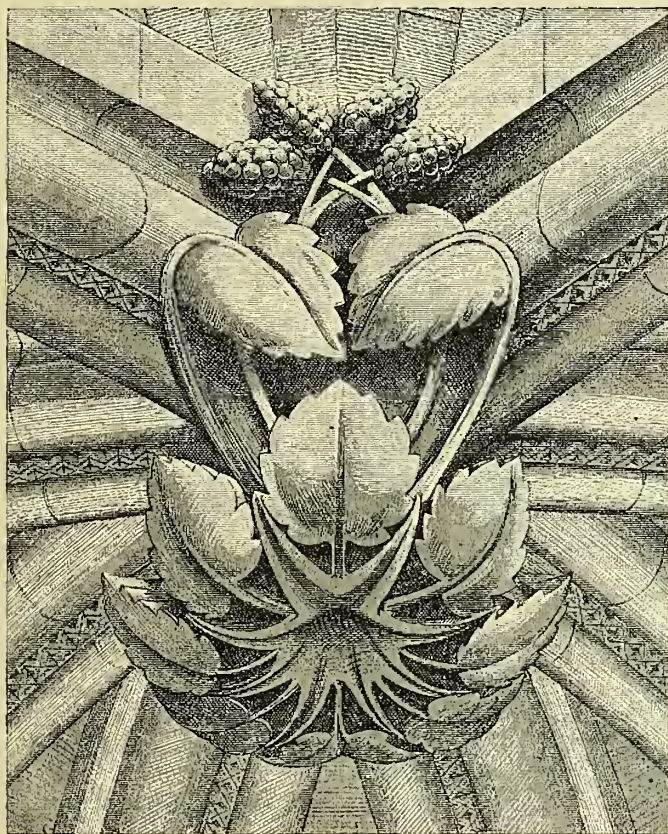
University of Pennsylvania School of Architecture. The School of Architecture, at the University of Pennsylvania, has passed the experimental stage and become one of the permanent institutions of Philadelphia. Indeed, it may be questioned whether an experimental stage has been part of the history of the school; so unmistakable was the need for it and so earnest the purpose and efforts of its founders that from the beginning it took strong hold upon the interest of Philadelphians, and has ever since steadily gained in strength and favor. The opening of the second year has shown this very clearly. The Freshman class is more than twice in number that of last year; a higher grade of students have applied for admission, while the percentage of students electing to take the full course is nearly ninety as against less than sixty last year. A vigorous policy adopted by the faculty at the end of the first year had the effect of reducing the number of students nearly one-half, yet, notwithstanding this and the raising of the standard for admission, the attendance has this year reached twenty-seven. The course of study now being offered is entirely academic, and embraces all the subjects necessary to a thorough technical training in architecture. It is under the direction of Professor Warren P. Laird.

Sixth Annual Convention N. A. B. The sixth annual meeting of the National Association of Builders, which will be held at Cleveland, Ohio, next month, again brings the question that seems to agitate many local exchanges at their annual meetings, which are held about this time, and which is brought up by the appointment of delegates to the convention — "does the National Association pay?" Now, the largest sum assessed any member of any exchange, as far as we can learn, for the entire six years of usefulness which the National Exchange has passed through is about seventeen dollars, or less than three dollars a year. The man who believes he has not received some benefit in his business from this constant exchange of thought among the most successful builders in the country could not learn were they to give their entire time to his instruction, and he should instantly withdraw from a body of men so inferior to himself in intelligence.

Architecture and the Allied Arts.

BY BARR FERREE.

NORTHERN artists excelled in the use of sculpture. Gothic architecture is one that readily lends itself to the use of sculpture decoration. The Egyptians did not make use of this art in the embellishment of architectural parts, such as the column, capital, architrave, etc., nor did the Greeks in the Doric; both relied exclusively on painting for ornamentation. In the Ionic and Corinthian a certain amount of sculpture was used, but the columns of each building were simply replicas of each other and offered no variety. In the Byzantine and Romanesque styles a different system



BOSS, LAON CATHEDRAL.

came into use, consisting in surmounting the columns with capitals obtained from various sources. In this way a greater variety was given to the architectural members of a building than was possible under the more formal method of the Greeks and Egyptians. It was an easy advance from this to carve specially designed capitals when the means of the builders permitted them to do so, or when there were no longer any ancient capitals to steal from other structures. Nor was this all, for the dependence of the Gothic on small materials naturally suggested ornamenting each course of stone with different decorations and additional impetus was given to the employment of carved embellishments. The Gothic thus offered unrivaled opportunities for the display of the sculptor's art. Even the plainest of Gothic buildings, and most devoid of the assistance of the accessory arts, affords in the capitals of the columns and the carving of the other architectural members a quantity of work of the highest interest, which not only has a duty of its own to perform, but a particular architectural principle to express, and is therefore an essential part of the building.

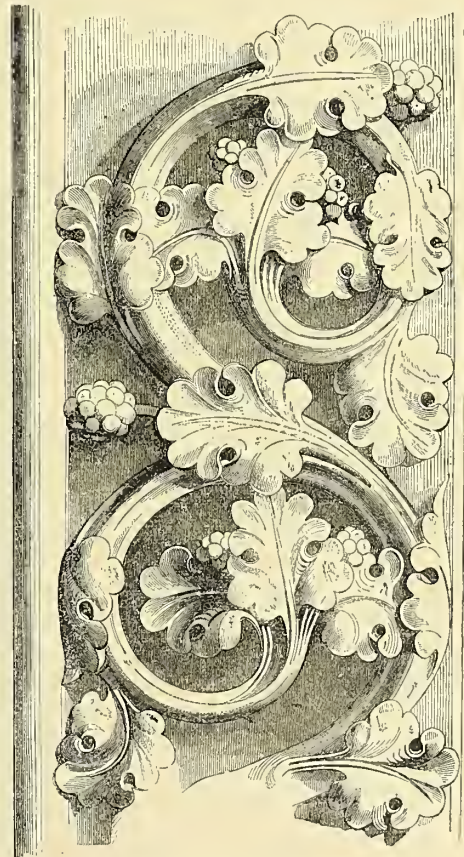
There is absolutely no limit to the variety of ornament that the Gothic architects gave to these parts of the structure. Scarcely any two capitals are alike in the cathedrals of France, and the examples in other parts of Europe are as infinitely varied. Sometimes the ornament is a leaf or a combination of leaves, more or less conventionalized. Sometimes buds and flowers are introduced; at others animals and strange grotesques add to the variety. Now a human head is carefully carved in the midst of a ground of leaves, and again a little monk or a leering devil protrudes from the most unexpected corner. The richness of invention displayed in these works is marvelous and seemingly without limit. There is no formality, no stated rules, no bounds that the artist is compelled to respect. He gave full swing to his fancy, and though at times the grotesques he produced seem somewhat out of place, judged by our modern ideas of the solemnity of a church building, they were not so in reality. No better expression

has ever been given to the buoyant life of the art world in the middle ages than is to be noted in the capitals of the columns. And when it is remembered that these features frequently numbered hundreds in a single edifice, each different from the other and each with a character and force of its own, it will be seen how important was the part they occupied in a mediæval building.

The capital was but one of the parts on which the skill of the sculptor was exercised. The column was not seldom ornamented with carving, sometimes in its entire length, sometimes in bands at stated intervals. A very ordinary method was to separate the different courses of stone of which the column was composed, with string courses, more or less carved. The base of the column likewise came into its share of the ornamental process, though generally confined to moldings. String courses, carved in simple moldings or ornamented with leaves and other devices, were carried across the walls to mark the leading lines of the buildings, and were used both externally and internally. Bosses were placed at the junction of the ribs of the vaulting, and were frequently splendid pieces of work. The ribs of the vaulting, and the under sides of the arches were often decorated with bosses, leaves, acorns, knots, crochets, and similar devices, and on the exterior grotesquely carved gargoyles carried off the water from the roof.

Carved forms were used on the outside of the building as well as within, and the windows and doorways are points of more or less elaboration. In France, the greatest display of sculpture was on the doorways, on which the artists lavished the fullest resources of their art. The doorway naturally prepared the way for the solemnity of the interior, and it was fitting that the symbols displayed on it should prepare the faithful for the high purpose to which the building was dedicated. Nowhere in Europe were the doorways so fully developed as in France, and they are justly regarded as the pride and greatest glory of the French cathedrals. The portal was the chief feature of the front, and with its porch and ornamental details frequently occupied the larger part of the entire façade. The cathedrals of Paris Chartres, Reims, Amiens, Bourges and Troyes all possess portals of great extent and wonderful beauty.

Those at Paris do not monopolize the façade as in some of the other cathedrals, but the results in all cases are among the finest produced by any architectural monument. The doorway proper is deeply recessed in a series of arches which bring the main arch on a line with the building, as in Paris, or with the porch, as in Amiens and Troyes. The arches are supported by columns, with elaborately carved capitals, frequently having between them a series of statues on pedestals or placed on the front of the column of which they become an integral part. The under surface of the arches



ORNAMENTED BAND, NOTRE DAME, PARIS.

is occupied by other statues and carved ornament, and the tympanum over the doorway is filled with a sculptured figure or group, the favorite theme being the Last Judgment, or Christ as Judge of the World, a fitting reminder of the end of man and a warning to prepare for the life to come. The system here briefly outlined is one of the simplest, but an infinite variation of design was made on this basis. Frequently rows of reliefs were inserted above the columns below the springing of the arches, and sometimes the column which supported them disappeared and their places were taken by statues. There was, in fact, no definite

rule, and the architect aimed only at producing an original work that would surpass all others of a similar nature.

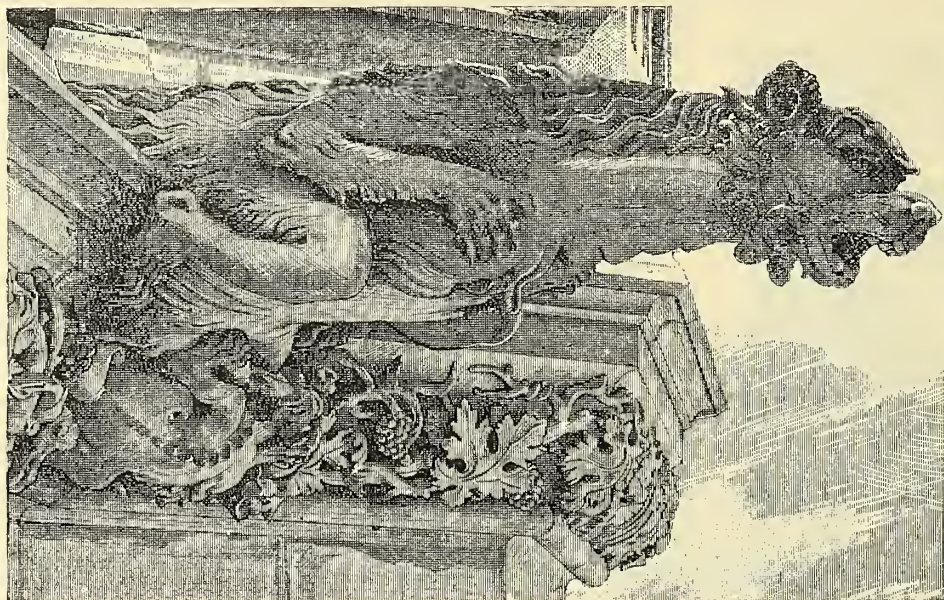
The gigantic arches of the French doorways gave a character to the opening which not only permitted an elaborate decoration, but rendered the entrance to a cathedral the most important feature of the edifice. A different system was carried out in England and in most German churches. In these buildings the doorways are comparatively insignificant, and occupy but a relatively small part of the façade. The doorways at Cologne, for example, are notoriously out

by the Gothic artists, reaches its finest expression. The richness and variety of the carving add materially to the effect of a façade of great architectural merit. The three great western portals, the surfaces of the buttresses, the projection above the portals, and the space over the rose window in the central aisle are all adorned with reliefs; the gallery crowning the façade, and the lateral buttresses, are ornamented with statues, so that the architecture seems almost lost in sculpture. Nor is the wonderful decoration limited to the main façade, but the fronts of the transepts are as elaborately decorated. Within

the church the entire west wall is filled with small statues in niches, placed in rows one above the other. Great and splendid as are the sculptures of the cathedral of Reims it is but one of many churches adorned with almost equal richness. Nowhere else are the sculptures carried out on so grand a scale and applied to so many parts of the building, but there are numerous other instances where certain parts are decorated with similar magnificence. Each of the great cathedrals of France illustrates the important aid that sculpture gives to architecture. No Gothic building was complete without this adjunct and the history of Gothic sculpture is intimately connected with the history of Gothic architecture.

The history of mediæval art presents a series of developments in particular directions. In Italy painting was the most highly developed of all the arts; though this may perhaps scarcely be said of the Gothic period. In France architecture reached its finest form; and while painted glass was carried to a high point of perfection, sculpture was the practiced of all the subsidiary arts. In England neither

painting nor sculpture had the importance it had on the continent. In Italy sculpture was not neglected for the sister art of painting. The development of the latter was more rapid than that of the former, but early Italian Gothic buildings employed it to a very considerable extent. In the façade of the cathedral of Sienna mosaic is a largely used decoration, but in the cathedral of Orvieto sculpture is used in a profusion not heretofore seen in Italy, and in the master works of

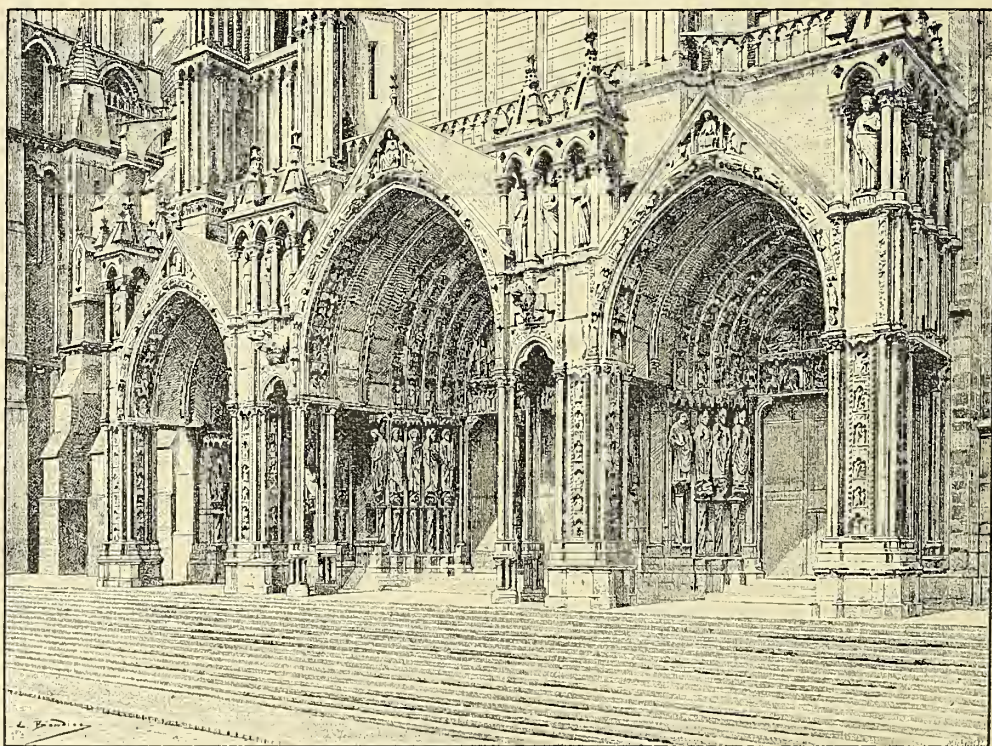


GARGOYLE, NEVERS CATHEDRAL.

of proportion to the enormous height above them, and are one of the greatest defects of the building. In England a similar system was followed, much to the detriment of the structures they were intended to ornament. Notwithstanding the free use that was made of sculpture in all parts of the Gothic structure, the doorway was the point at which it was most extensively employed. By occupying every available position the artist managed to crowd an almost inconceivable number of figures into a given space. The sculptures on the doors and porches of the transepts of the cathedral of Chartres include nearly 2,000 figures of all sizes, and illustrating not only the entire story of the Redemption, but the sum total of the knowledge of the times. These portals were of unusual magnificence, but there are many others which approach them in the elaboration of their decoration.

The Gothic artists did not limit their carving to the architectural features of the building, and did not hesitate to fill the vacant spaces of the wall, the spandrels of the arches and all other available space with their best work. What it may lose from the standpoint of a perfect form it more than makes up by the spirit of truth, the search after better things, the expression of the life and thought of the age. No better index is required of the rapid changes in mental growth that humanity underwent in the clearing away of the dark ages than the sculptured designs on all parts of the buildings. We may point out errors in technique, distortions of positions, lack of knowledge of perspective, and a multitude of details in which we require perfection in the art of our own time, but superiority in details do not make a thorough art, nor indicate a genuine love for it. The very faults of the Gothic carvers speak volumes for the estimation in which art was held, and indicate an appreciation of truth that is often wanting in the art of other times.

The façade of the cathedral of Reims is one of the finest examples of a fully developed Gothic exterior. Here sculpture, as interpreted



SOUTH PORCH, CHARTRES CATHEDRAL.

Giovanni Pisano it was placed for the first time in a position of equality with painting and mosaic. Some other Italian churches exhibit the same decoration, but the genius of Italian sculptures was employed more on interior furniture and monumental work than on decorating entire façades. In England the low state of painting and sculpture arose naturally from the lack of a native school of art such

as existed in Italy and France, and the consequent dependence on foreign artists. In but a single English cathedral — that of Wells — has there been any attempt at a general scheme of sculpture decoration. Here upward of 600 figures are introduced in horizontal rows of statues or reliefs depicting the History of the Redemption. The experience gained in the production of this work was not availed of in any subsequent church building, and while the English cathedrals are not devoid of sculpture they cannot begin to compare in this respect with the cathedrals of France. Frequently the capitals were simple moldings without any ornament.

An architecture which encouraged the use of painting and sculpture in close juxtaposition, as the Gothic, necessarily permitted the use of painted sculpture. The origin of the application of colored ornament of any kind to the exterior of buildings is found in the use of mosaic, which was the most ancient as it was the most gorgeous of Christian decorations. When mosaic went out of use, which was probably due more to a diminishing of the technical knowledge necessary to produce it than to an appreciation of the superior advantages for individual work afforded by painting and sculpture, the same style of decoration was retained by the use of paintings. Much of the earliest work in external painting is a direct copy of the results obtained by mosaic. The greater part of the color in all mediæval buildings has been lost, but sufficient remains to indicate how very generally it was employed. It was not limited to sculptured work alone; but stonework, as distinguished from statues and reliefs, was also colored.

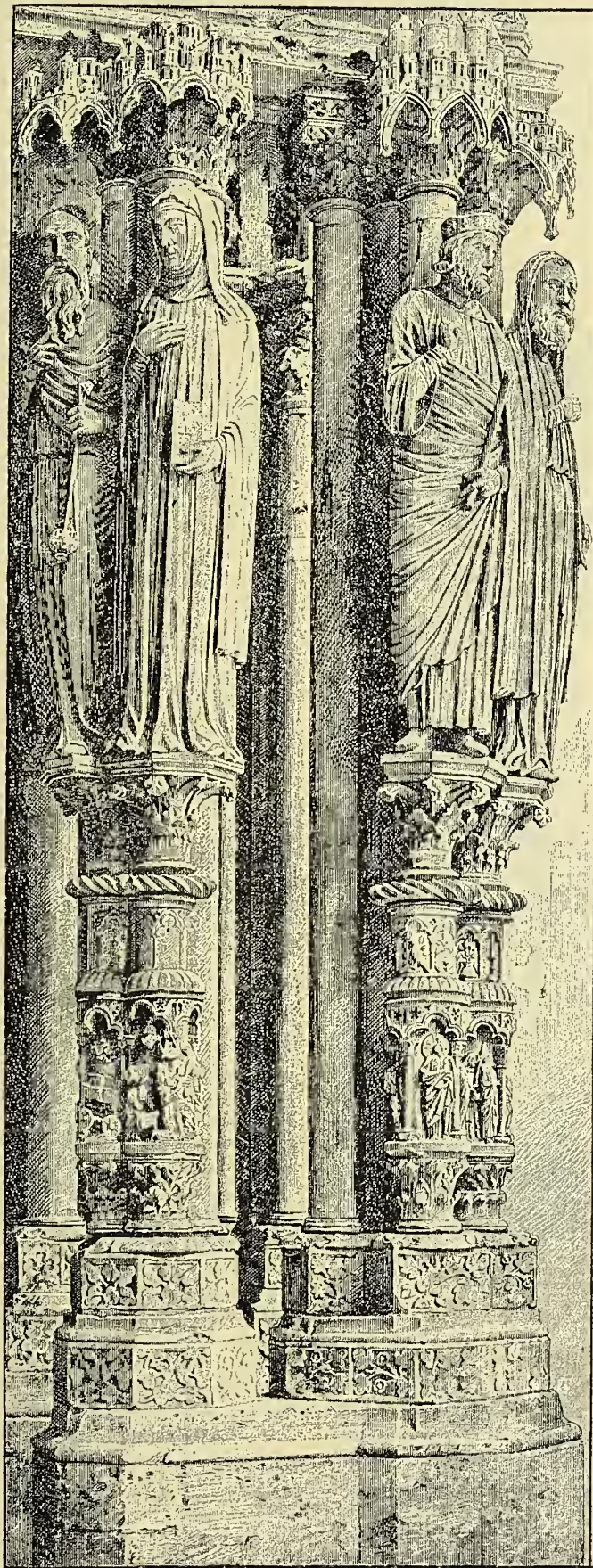
The influence of architecture upon the relative progress of sculpture and painting is thoroughly illustrated in mediæval art. As building preceded ornament, it is evident that the cultivation of either art was due to structural peculiarities, and that the relative capacity of any one people for one style of work did not determine the style of the architecture, but on the contrary, the architecture fostered and encouraged the national capacity for certain kinds of art. Thus, for example, the hot, brilliant sun of Italy necessitated small openings, and the buildings required but little light to render them suitable to the climate. The Italians found themselves confronted with enormous blank wall spaces, and at once set to work to cover them with paintings. The genius of the people was therefore directed almost exclusively to this sort of decoration, and the progress of sculpture was comparatively slow. In France, on the other hand, the climatic necessity for large windows, as well as the structural tendency of the architecture to expand the opening at the expense of the wall, absorbed all the wall space, and there was no opportunity for the production of great mural works, such as were

to be found in the South. Carving and sculpture thus became the favorite and most practiced arts in the North, where an advanced school of sculpture flourished nearly a century before the art begun to revive in Italy. Mediæval sculpture has had the misfortune to

be treated in a superficial manner that it is far from deserving. Sandwiched, as it were, in between the glorious art of the classic period and the Renaissance, it has been alternately looked upon as the decadence of the former and the preliminary stage of the latter. In studying an art where beauty of form is combined with beauty of execution, historians have been apt to overlook an art in which faithfulness to nature and an earnest regard for truth more than makes up any deficiency in form. A rich, extensive and little worked field for research is afforded by mediæval sculpture, and it is to be hoped that its extremely interesting remains will not long remain a closed book.

Sculpture was not only one of the most important means of decoration employed in the French cathedrals, in which structures Gothic art had its fullest and freest expression, but in its earlier forms it gives ample evidence of the influence of architecture upon it. The long, stiff, narrow figures which were used before the columns of the portal, as, for example, in the western portals of Chartres Cathedral, are elongated because the artist thought it desirable for the position they occupy. The smaller figures of the same portal are quite natural in their proportions, but the larger figures are exaggerated, so as to give them almost the appearance of columns themselves. In work of a later period this singular attenuation was diminished and all the portal figures took natural proportions.

It may be going too far to maintain that of all forms of architecture the Gothic is that best adapted for the employment of a great variety of accessory arts, but it certainly is the style which most employed them. Even the Renaissance, as we shall shortly see, did not surpass it in multiplicity of materials and devices. Sculpture, painting, painted glass were employed in a profusion never equaled, and a fully developed and ornamented Gothic cathedral presents a picture of infinite variety and wonderful beauty. These three arts were the most used, as they are those in which, with the exception of architecture

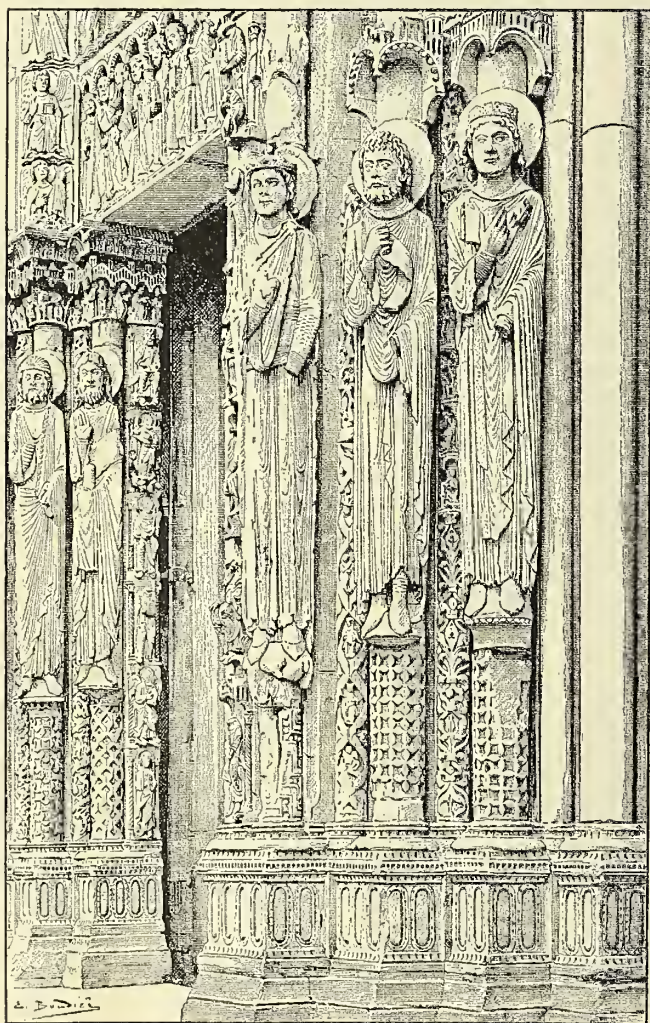


SCULPTURE ON NORTH PORCH OF CHARTRES CATHEDRAL.

itself, the artistic genius of mankind has chiefly found vent. But the mediæval builders were too profound artists to let any opportunities escape them, and they employed many minor arts and every possible material. The ancient records tell us of the large quantities of precious metals, both gilt and silver, that were used in certain buildings. In A. D. 328 Constantine presented to the churches in Rome crosses of gold weighing 300 pounds, large patens of gold,

chalices, lamps, luster fonts and altars of gold. From an account in the Bodleian at Oxford, we learn that in A. D. 684, King Ina caused to be built a chapel of gold and silver, and placed within it ornaments and vessels of the same costly materials. In A. D. 1066, Harold had Waltham Abbey Church ornamented with plates of copper plated with gold. He also made an altar of gold and golden vessels for chief days, and silver ones for feasts. None of these monuments have come down to our day, the material of which they were composed offering too tempting a bait for needy monarchs and being easily made away with in times of disquiet or war. This costly display of wealth was limited to a few special instances; it never came into universal use and was intended more as a votive offering on the part of the sovereign or donor than as any regular form of embellishment for churches.

But though Gothic builders never made a practice of lavishing the costly metals on their architecture, they did not hesitate to employ it for the sacred utensils, altars, shrines and like structures of small size



PORTAL SCULPTURES OF CHARTRES CATHEDRAL.

which were part of the furniture of the church. Metal shrines came into use in the ninth and tenth centuries, and before long gold and silver were reserved for them. The veneration of the age for sacred reli naturally suggested the use of the most costly materials and the employment of the most developed art for their resting places. The shrines were of various sizes, some approaching very respectable proportions, while others were small. All were more or less elaborately finished and some of the most exquisite work of mediæval artists is to be found in them. Bronze, silver and silver gilt were employed, according to the wealth of the builder, and the merit of the structure was not in the costly material but in the art value given it by the genius of the artist. One of the most splendid of early shrines is that of S. Taurinus in the cathedral of Evreux. The shrine of S. Eleutherius in the cathedral of Tournay is another interesting example; but the most magnificent monument of the kind is the famous tomb of S. Sebald, at Nuremberg, by Peter Vischer. This monument exhibits none of the restraint of mediæval work and belongs to modern art, but it is the legitimate successor of the earlier shrines.

The furniture of a Gothic cathedral was an element of considerable importance, and materially added to the general appearance of

the interior. Altars, shrines, screens, galleries, organs, stalls, thrones, pulpits, baptismal fonts, canopies, gates, lecturns, doors, candlesticks, the vessels of the altar, all were given architectural form and all had Gothic characteristics. The altar was sometimes a simple slab, at others the table was supported by a sculptured frontispiece. One of the most celebrated monuments of Italian Gothic art is the Tabernacle of Or San Michele by Andrea Orcagna, which, while having many of the characteristics of an altar, is really a shrine. The central feature is the great picture of the Madonna and Child, attributed to Ugolino di Sienna. This, however, is but a single part of a wonderful whole. Orcagna has covered his tabernacle with reliefs and statuettes, the former relating to the life of the Virgin, and the latter consisting of prophets and angels. The sculpture is rich and varied and the structure has the appearance of being carved from one piece of marble. Each figure has, however, been carved separately, and the whole joined with the greatest care. It was once decorated with gems, but the genuine jewels have long since disappeared, and their places filled with imitation stones. The monument exhibits the influence of the goldsmith's training that Orcagna had, but it nevertheless ranks among the best work of Italian Gothic.

Painting developed more rapidly in Germany than in France, and German altar pieces are superior to French ones. One of the finest was painted by Hubert and Jan Van Eyck for the Church of S. Bavo at Ghent. The art of this wonderful painting carries it out of the realm of Gothic, but it is so complete and so fully illustrates the German method that it may be referred to here. The picture was a double one, with folding doors, and was painted both within and without. When opened, the central compartment displayed the Adoration of the Lamb. Above was God the Father on his throne, with the Virgin and S. John the Baptist on either side. The right-hand wing had, in the lower division, groups of Pilgrims, Hermits, Saints and Poor, and above S. Cecilia playing on the Organ, and in the outermost compartment, Eve. On the left were Pilgrims, Kings, Princes and Rich, groups of Singing Angels and Adam. The space over Adam was occupied by the Sacrifice of Cain and Abel, and that over Eve with Cain slaying Abel. The outside of the wings was likewise in two rows of compartments. John the Baptist and John the Evangelist filled the lower central ones, with Jocodus Vyts, the donor of the picture, on one side and Lisbetta, his wife, on the other. Above was the interior of the Virgin's House, with the Angel of the Annunciation on one side and the Virgin on the other. The space over these was occupied by two sybils and two prophets.

In the fifteenth century a well marked school of carvers in wood was developed in Germany and was employed largely in the production of altars. The general plan of these works was a large shrine filled with statues or small scenes in relief. Richly colored and gilded they presented a brilliant appearance. Sometimes the central panel was occupied by a painting and the carving continued the scene represented. The high altar of the Church of S. Kilian at Heilbronn is one of the richest and most splendid of German carved altars.

In Spain a high reredos, frequently reaching to the roof and filling the entire space of the apse, is the usual form. The brilliant climate did away with the necessity for windows here, and the architect took advantage of this natural condition to devise a characteristic piece of church furniture. Many Gothic monuments of this kind have been removed to make way for hideous over-ornamented specimens of Renaissance, but some few of the earlier ones still remain. One of the finest is the retablo of the old cathedral of Salamanca, described by Mr. Street. It fills the entire wall of the apse and exactly fits the curve, though the usual plan is to cut off the eastern end. It consists of fifty-five panels, five feet in height and eleven feet in width, each surrounded by a delicate architectural framework. The panels are richly painted with a groundwork of gold, and the effect is further heightened by the white of the tracery. The work is of wood and dates from the fourteenth century. Above the retablo the semi-dome of the apse is occupied by a Last Judgment. A later example, designed by Damien Forment (1509-1515), is the extremely rich retablo in the cathedral of Our Lady of the Pillar at Saragossa.

CHICAGO surveyors have issued a circular letter calling attention to the importance of the work done and the inadequate remuneration heretofore received, and notify owners, architects and builders that the fee for surveying an ordinary house lot, including street grade, shall be \$18; for survey alone, \$15; and for the street grade alone, \$10. The fee for the survey of larger lots and for lots in the business parts of the city will be subject to special arrangement depending upon the value of the property, the difficulty of access and the character of the structure to be erected upon the lot. For acre property in open country from \$3 to \$7 per acre, and for survey by the day for a party of three persons, \$25 and necessary expenses.

Notes from our French Exchanges.*

VENTILATION APPLIED TO BUILDINGS.

SOME of our subscribers, says *La Semaine des Constructeurs*, have asked us to indicate the most economical arrangements for ventilating their rooms and workshops without risking the injuring of health by a too sudden cooling of the air. The study of a complete system of ventilation is necessarily closely allied to that of heating and lighting, and in a properly constructed building, the heating apparatus should serve to ventilate or at least assist in the ventilation. To ventilate an apartment or a room consists simply in removing the air as rapidly as it is vitiated by the breath of the occupants, by lights, or by any other cause. The problem is complex, because the means of ventilation ought to be such as can be employed under very different conditions—to great rooms and audience halls, to small rooms, and also to factories and workshops. Finally, it is necessary to take into consideration the season of the year in which the ventilation takes place. In winter the heating and lighting apparatus create of themselves a demand for fresh air, which enters through the cracks about windows and doors, and necessarily there is a corresponding amount of vitiated air forced out of the room. In summer, however, it is quite otherwise, and then it becomes a question of taking air from the outside at a temperature lower than the room itself, and without mechanical devices this is often much more difficult to accomplish than in winter.

To have fresh air to ventilate a room, it is often taken by means of chimneys at the top of the building. In fact the air there is at a lower temperature than at the ground, but the taking of this air requires certain precautions. Care is required to avoid the proximity of all dangerous or unhealthy emanation, also to avoid a locality where there are large reflecting surfaces like certain kinds of roofs, which would heat the air within their vicinity.

A cross section of an air conduit should be large enough so that the flow of air shall not be too rapid. Everyone recognizes that most of our houses, especially the ones for rent, have no arrangements whatsoever for the renewing of the air in summer, and an elementary precaution almost invariably neglected is to open the dampers in the fireplaces at night. [In America, one might open the windows, not having that dread of fresh air so deeply implanted as on the continent!] Also at certain hours during the day a natural and beneficial airing out might be brought about by this same means. It is frequently the case, however, that the fireplaces are hermetically sealed up by an ornamental covering, which closes it up all during the summer season.

We strongly recommend this method of ventilation; but each case should be separately studied, as to the draft of the chimney, the position of the flue, and especially in respect to the hours of the day when it is heated by the rays of the sun, since by this means only can practical success be obtained by this very simple process, which is covered by no letters of patent. Let us now consider the influence that the location of the air inlets and outlets has in ventilation.

In the problem of summer ventilation the difficult point is to find a location from whence one can take air that is both pure and fresh, and at the same time satisfy the two conditions of expelling the foul air, and introducing a corresponding volume of new air. But in all cases, whether of summer or winter ventilation, it is desirable that the air introduced shall be of a lower temperature than that of the room to be ventilated, consequently let us first study the movement of the air in a closed room, according to the position of the inlets and outlets.

If the outlets for the foul air and the inlets for the fresh air are both near the floor—by two openings at opposite sides of the room—the fresh air goes across the room and is rapidly drawn out, while the hot air of the room, on account of its greater lightness, rises and accumulates below the ceiling. Hence this arrangement is defective and does not fulfill the proposed requirements, since the air introduced has not perceptibly lowered the temperature of the room while passing through. A little more satisfactory result is obtained by placing the inlet near the ceiling and the outlet near the floor. In this way the denser and less pure air is naturally forced out, but at the same time the cold air is forced out and the temperature of the room has not been much lowered. By placing the inlet and outlet at opposite sides of the room, and both near the ceiling, the requisite conditions are fulfilled, since the cold air descends in the room, on account of its greater density, while the hot and vitiated air above has a chance to escape by the outlet prepared for it. A good result can also be obtained by placing the inlet of cold air near the floor and the outlet for foul air near the ceiling; but it is to be noticed that this disposition may seriously discomfort and possibly injure those who are obliged to work near the cold-air entrance. This difficulty may, however, be in a measure overcome by increasing the number of fresh-air inlets without increasing the quantity of air introduced. But whether the air be brought in at ceiling or floor, it should be distributed about the room with all precautions and should especially be done with a slow current, which may be readily accomplished when mechanical ventilating machines are employed, as would be necessary in all large establishments.

If fresh air of low temperature cannot be directly procured, it should be cooled artificially before introducing into the rooms to be ventilated. For this purpose it is sometimes made to pass in conduits through large cellars where the temperature is low; but when this is impossible or impracticable recourse can be had to other means. In England air is purified by passing it through a wall built of coke, kept wet by a small stream of water. M. Generte has applied the same principle in the following manner: A large cylinder is filled with

coke and moistened by water dripping on it from above. The air to be cooled is introduced at the lower part of the cylinder and passed through the coke in its upward passage. Also a very considerable use is made of freezing mixtures, but all of these are expensive. Another process employed with considerable success consists of forcing a current of air through a sheet of water, which very perceptibly reduces the temperature. Thus it is seen that of mechanical devices an architect may find a large field to draw from, although unfortunately the most perfect systems are decidedly expensive.

For detailed study of this subject the following book is recommended: "Chauffage et Ventilation des Lieux Habités," for sale by André, Daly fils et Cie, Paris.

THE PROGRESS OF FIVE HUNDRED YEARS.

At the last salon, in the section of architecture, M. Barbaud exhibited a remarkable series of drawings, photographs, etc., showing the actual state and a restoration of the old chateau of Bressuire, one of the most curious specimens of French architecture of the middle ages, parts dating back to the eleventh century. The work was at once awarded the great silver medal by the jury, and so noticeable was the impression made by the drawings that the author was requested to speak before the recent congress of architects upon the subject. In fact, very general interest seems to have been taken in this old feudal castle, and apropos of it one of the most distinguished of the French architects drew up a curious document, showing most forcibly the changes of modes of living in the last five hundred years. This is published in *L'Architecture*, where he says: What kind of an age was it when such a dwelling was required? Certainly, the Lords of Beaumont, who resided there, were a rich family; but is it possible to imagine one of our present very rich families now forced to live in this kind of a bastille, even if furnished with all imaginable luxury? How quickly they would take the first railroad train to escape! I suppose for an instant that our École des Beaux Arts then existed, and that the professors gave out their programmes, the same as now, so that what would now be the country place of a rich person would then have been the castle of a high and powerful seigneur. Let us try a parallel of these two:

YEAR 1391.

The castle of a high and powerful seigneur.

This construction will be built upon a precipitous rock, as inaccessible as possible.

The approach will be by a crooked, narrow path, provided with pit-falls, wolf traps, and protected by a chevaux de frise.

First. At the entrance shall be a small gate, flanked by towers, with a draw-bridge, all properly protected by port-holes and embrasures.

Near to this entrance shall be a post for archers, a look-out man, a guard-room, and all the means for a first defense.

The castle shall be surrounded by several high walls, with towers, all provided with places to shoot from, and the whole inclosed within a deep ditch.

In the first enclosure, interspersed with walls for defense, will be the following indispensable military dependencies, viz.:

Barracks for soldiery, comprising horsemen and foot soldiers.

A magazine for different kinds of arms, including stones to throw down from the parapets.

A place to boil water and oil, to turn down on the heads of an attacking party.

Store house for live stock, grain and general provisions for a siege.

Second. In a second enclosure also defended by walls, but higher and thicker than the first, shall be the citadel, which can be held against a large attacking force, even when the first enclosure had been forced by the enemy.

It shall contain a small place of residence.

Besides the necessary defenses, such as towers and iron-studded gates, there shall also be

A family living room and several sleeping rooms, taking up the least possible space, giving all the room necessary for means of defense.

A room for storing tar, Greek fire, etc.

Several prison cells.

A torture room, with place for all instruments of torture.

A sufficient number of dungeons.

At the highest point a gallows shall be erected, which shall be in plain view from all directions.

There shall be an extremely large cistern in the citadel, which will contain a supply for several months.

All the windows shall open upon the interior courts; the outer walls only be pierced with holes for the use of engines of war.

YEAR 1891.

The country place of a rich private individual.

This construction will be built upon a gently sloping ground and within easy distance of a railroad station.

The approach will be by a wide avenue of large trees, where shall be the carriage drive, the whole bordered by wide lawns.

First. At the entrance there shall be a monumental gate with a principal entrance and two smaller entrances at the sides.

Near this entrance there shall be a gate lodge, also a gardener's cottage, with seats, benches, etc., in abundance.

The building shall not have any kind of walls or inclosure about it, but will, at several points have doorways leading out directly into a very large pleasure ground and park.

In a rear enclosure, which shall be large and open, will be placed the following dependencies, viz.:

Cottages for persons employed on the estate, including gardeners, coachmen, etc.

Barns, stables with both box and open stalls, with a large storehouse for garden utensils.

A small ice-house for butter and eggs.

A large greenhouse with a room for the arrangement of cut flowers into bouquets, etc.

Second. In front of the buildings mentioned and open at all sides shall be the residence proper, which shall be in direct communication with the gardens and flower beds.

It shall be a very large and spacious residence.

Besides the large vestibules, steps, etc., necessary as means of entrance, there shall also be

A very large reception hall, together with very fine dining room, parlor, drawing rooms, etc., with spacious suites of rooms for the family.

A large library.

Several boudoirs.

Fine hot, cold and Russian baths with couches, hot and cold rooms, etc.

Numerous suites of apartments for visiting friends.

At one of the highest places there shall be an observatory tower, from which the finest views of the surrounding country can be obtained.

There shall be fountains, vases, cascades and general ornamental effects with water as a feature.

All light shafts and interior windows shall be avoided, but the outer walls shall be filled with large openings permitting views of the country in all directions.

Does someone say that this is a play of antitheses? But no antithesis will be as great as the contrast of the things themselves. Ah, the good old times! Only to think of them makes the cold

*Translated and arranged by W. A. Otis, architect.

shivers run down one's back. This good old time, thank goodness, is past; the Renaissance buried it; the struggle was short but sharp. As the old customs were killed by new ideas, so the Renaissance ought to kill off that old architecture.

Illinois Chapter A. I. A.

AT the regular meeting of the Illinois Chapter of the American Institute of Architects November 16, in accordance with a request received from the Chicago Real Estate Board for an expression from the chapter regarding the limitation of the height of buildings, the matter was taken up by the chapter. It was stated by the president that this request was received since the last regular meeting, and a meeting of the executive committee was called and a letter ballot sent out. In response to this, out of a membership of sixty-seven but thirty-one responded, of these twenty-seven were in favor of limiting the height of buildings to 125 feet for all buildings except elevators and sugar refineries and 100 feet for hotels and apartment houses; three were undecided, and one against any such action.

Mr. Adler inquired why exceptions were made in favor of one class of investors as against others in the matter of grain elevators and sugar refineries.

Mr. Clay replied that, generally speaking, buildings which are inhabited are likely to congest the streets. The main object in taking such action as proposed was not that the buildings could not be erected or are not safe, but the objection to high buildings was that there is not room in the streets to accommodate the population. These buildings were probably excluded from the list from a sanitary standpoint. He concluded by saying that he did not believe in restricting the height of buildings or anything in which the efforts or genius of man could be demonstrated, and that owners should be permitted to go as high as it is possible to build.

Mr. Willett did not view the question as one of great moment either from an architectural or an engineering point of view. He considered the sanitary feature as the most important, and one to which attention should be called. He did not think that it made very much difference if only a few such buildings were put up, but should the streets be lined with them we would be a city of cave dwellers. He was surprised that the doctors were not up in arms against their construction. Hospitals were constructed with a view to as much floor space as possible and the accessibility of air and light. As it is, we are building cities upon cities, and if it continues our children will be pulling them down.

Normand S. Patton did not believe in placing the chapter on record before the subject was thoroughly discussed. He had not yet given up the idea that he was to be the designer of a sixteen-story building. He did not believe in any unnecessary restrictions, yet all must now stop and begin to think of what would be the result of building up both sides of the streets with these tall buildings. He thought that the greed of individuals should be restrained for the good of the public. He knew where occupants of offices had sought other quarters owing to the cutting off of the light, and that the occupants of all the buildings would be confronted with the question of taking rooms in the lower part of the building, or in the upper part above all the surrounding structures. He said that we owe to the present high buildings the superior class of fireproof construction which now prevails. He thought that they might be hazardous to the occupants of the upper stories in case of fire. The main objection that could be urged against them is the cutting off of air and light. The limitation of the height should also, he thought, be considered from an esthetic point of view.

Mr. Hill, one of the ablest advocates of the measure, thought that the future should be taken into consideration. At present Chicago has a million and a quarter inhabitants, and the streets are very much congested. This city occupying the geographical position which it does, with its thirty or more railroads, and its lake commerce, which for the eight months the season is open is larger than that of New York City for the entire twelve months, will, before fifty years have elapsed, be the largest city in the world. It will probably have five million inhabitants, and if these Babylonian imitations were allowed to continue he did not know what would become of the people. There had been some talk about underground passageways and elevated ways, but the streets were intended for traffic.

Mr. Beaumont felt that common courtesy to the real estate board demanded an early reply. He did not think it easy to specify at exactly what height buildings should stop, and the committee had no time given to them to go into details. He explained that from a sanitary standpoint the height of buildings should be limited. In the sections of the city where big buildings were the rule, he said the streets were colder in winter and warmer in summer because it was difficult for the sun to get in, and dispel the cold weather, and wind get in and dispel the heat in hot weather. Smoke and steam pour down into the streets and cannot get out.

Mr. Seeley thought it would be a good plan to consider the subject from a legal standpoint, as if an ordinance is passed it must be upon such grounds that the courts will uphold it. He did not think they could go into court and say the high buildings are dangerous, as we already have high buildings. You preclude the construction of one thing on the ground that the public health demands it, and you permit something else which may be just as detrimental. The doctors say that the farm is the place for man to live, yet he keeps coming to the city and clambers into stories one above the other. He also develops a tendency to create centers. In regard to light and air, the man who cuts off his neighbor's light has no right to complain if some one puts up a building higher than his and cuts off his sunlight. The health of the man who does business on La Salle street in the region of the enormously high buildings does not seem to be in great danger,

and his ability to get around, to get through the streets, does not seem to be curtailed. If the height is to be limited he believed in limiting it to the highest now prevailing. In New York City an attempt to limit the height of buildings had been made and the courts overruled it. The limit should include all buildings which are used for residence purposes, the height of non-fireproof structures; and he said that he would also like to see an ordinance which would limit the construction of bay windows.

Mr. Adler said that he agreed almost fully with all that had been said. He believed that there were very few present who were socialists to the extent of denying that there were certain rights and privileges, both personal and the rights of property, which must yield to the good of the community at large. All of us must restrict ourselves in one way or another so as not to come in conflict with our neighbors. If it could be shown that limiting the height of buildings is conducive to the good of the community, it is the right of that community to establish such limitation, but it must be done legally. Since this discussion had been begun in this city, many reasons had been assigned for the desire to see such limitation established. One member stated that as far as the architectural view was concerned, there was no danger, yet if there were not so many high buildings put up there would be more of less height, and more architects consequently would be employed. A member of the real estate board said that if the height was limited, values out from the center of the city would be greatly increased. Mr. Adler considered both arguments selfish and not worthy of attention. The other argument was the concentration of traffic and the consequent congestion of the streets. He considered this absurd and ridiculous. He said that of those who have had occasion to go about on business in New York, Boston and European cities, there are none who will not say that it is possible to transact a given amount of business with more comfort in Chicago than in any of these cities. To see ten or twelve persons in London it was necessary to take from five to ten times as many steps as it was to see the same number in Chicago. The concentration of business he considered was the very thing which reduces congestion. In the districts of high buildings it is easier to get around than it is when they are lower. The congestion of State street, where there are but two buildings higher than six stories, was due to the temptations set before the people by the merchants who set forth in the newspapers the wonders and prices of their goods. If we want to prohibit the congestion of the streets, he thought the common council should pass an ordinance preventing the merchants from advertising their wares in the newspapers. He considered that the more the business was concentrated in the heart of the city, the less the people had to travel. Should the business district be extended to Twenty-second street on the south, Ashland avenue on the west and North avenue on the north, the several hundred thousand people would be thrown a great deal farther away. He thought the argument of congestion a very lame one. He thought that the greatest significance should be attached to the question of sanitation in relation to the high buildings. On the down-town streets, now lined with these buildings, the result would be that they would either have to be taken down or the streets raised to the fourth or fifth stories in order to get sunlight. Apart from that, the question of sanitation was altogether with the high buildings. The vermin-ridden structures are not to be compared with the new buildings now taking their places. The high buildings are better than the low ones because they are compelled to construct them of better material, and that if they returned to the construction of lower buildings, they would revert to cheap construction. He considered the recommendations of the Executive Committee regarding limiting the height of hotels and apartment houses particularly unfortunate. Should this recommendation be adopted, buildings of this kind below 100 feet need not be fireproof, while one 101 feet high must be fireproof. He thought they should forget everything but the good of the community, and whatever increases the volume of business in this city is of value to everyone doing business here. We are all interested in Chicago and the development of her business, and if concentration makes it possible to accomplish in three or four hours what would take much more time elsewhere, this is the kind of building we want to encourage. He thought it would be the duty of the chapter to guide the line of policy in the direction which will favor most the development of our business interests, and on such lines as will preserve as much as possible the sunlight in our streets and buildings. He then suggested a means by which this could be accomplished. He believed that instead of crowding out on the streets to the extreme edge of the ground, and then shoving bay windows out and taking additional space, a more enlightened policy should be followed, such as had been adopted in the Pullman building, the Rialto, Woman's Temple and in the German Opera House, all of which were built so as not to absorb all the light. In these buildings an external court is formed which gives back to the street a recompense for light taken. A building constructed after this manner, even if built two stories higher than the Rookery, Unity and others, would admit more light and more air than a lower structure built right out to the street line with an inner court. External courts or parts which recede can only, of course, be built on any large properties, and the owner of a small piece of ground could not build so high, but there are always large companies in formation and which also desire to secure larger holdings. Restriction should be elastic and should not confine the construction of buildings to one absolute dead level of sky line. The owners of these buildings are not putting them up because they are a menace to health. The public is waiting and anxious to pay rent for them, and when there is no demand their construction will stop.

Mr. Adler presented the following resolution:

Resolved, That the subject-matter limiting the height of buildings by municipal legislation be referred to the Executive Committee, with the request that the committee develop more fully the proposed attitude of this chapter with

regard to this subject with a view to securing such elasticity of the proposed ordinance as will be most in accordance with the best interests of the city; and that the Executive Committee report its further action to a meeting of the chapter to be held at the call of the president.

The resolution was adopted, after which an adjournment was taken until November 30, when the discussion was continued.

At the meeting November 30, Mr. Adler presented a draft of a letter to the building committee of the city council which recommended the limiting of the height of buildings to twice the width of the street and called attention to the "bay window, basement entrance nuisances," etc., and after discussing the matter of limit, using the same general arguments as at the former meeting, a resolution was passed recommending the limit to be placed at one and two-thirds the width of the street and again placing the matter in the hands of the executive committee to revise the letter and place it in the hands of the city building committee, after which the meeting adjourned to the next regular meeting.

The recommendations as finally formulated by the committee of the chapter and presented to the committee of the city council recommend that the height of buildings be proportioned to the width of the streets upon which they are to stand, and that this limit be determined with a view to the admission of direct sunlight to the streets for a reasonable part of the day — upon streets of 40 feet or less in width, to a total height of 100 feet; upon streets 40 to 66 feet wide to a height of 120 feet; upon streets of from 66 to 80 feet to a height of 140 feet; upon streets of 80 to 100 feet to a height of 165 feet, and for streets or open spaces over 100 feet in width, 175 feet. In the case of buildings erected with frontage upon streets of varying widths, the limit of height shall be the average of the heights fixed in the foregoing for streets of the widths of those upon which the buildings are to be erected. These heights may be exceeded if the building or a part of it is set back from the street line so as to materially increase the width of the street in front of this building. In this case the increase shall be permitted directly proportioned to the aggregate increase of width of street so made. Buildings may also be carried to greater heights if all parts of such structures which it is intended to carry above the limits of height prescribed shall be kept back of and within a line drawn from the opposite side of the street through the highest point of the wall as fixed in the first recommendations regarding height. Nothing in the recommendations shall prohibit the erection of spires, towers, domes or cupolas, provided always that their area is not more than fifteen per cent of the ground area of the proposed building. In cases where two stories or more are used in whole or in part for the storage or sale of combustible merchandise and the rest of the building for habitation, offices or manufacturing, the whole of the part used for the storage or sale of goods shall be provided with overhead automatic sprinklers of a standard and character to be fixed by the city fire marshal. All buildings 75 feet or more in height shall have a system of internal and external fire pipes made in accordance with a standard to be fixed by the fire marshal. In buildings where so-called skeleton construction is used the external skeleton shall be surrounded by masonry of sufficient thickness to resist the wind pressure to which the building may be exposed and of sufficient strength to carry its own weight independently of the skeleton structure to be used. In all buildings of greater floor area than 12,000 square feet a heavy brick wall shall extend from the ground to the top of the building for each additional 10,000 square feet or fractional part, and all openings through this wall shall be guarded against spread of fire by heavy iron doors on each side of the opening. The recommendations concluded by stating that the building ordinances of the city are in many respects not in accordance with the best modern construction and suggested that a committee be appointed, to which the chapter will lend its assistance, for revising them, calling attention to the fact that the present ordinances relating to slow burning and fireproof construction were the result of the deliberations of one of its committees.

Western New York Chapter A. I. A.

THE sixth annual meeting of the Western New York Chapter of the American Institute of Architects was held at Rochester, December 1, in the Chamber of Commerce, the following members being present: W. W. Carlin, Buffalo; Jacob Agne, Utica; Otto Block, Rochester; George W. Baxter, Syracuse; J. Blaby, Palmyra; H. H. Bickford, Elmira; J. R. Church, Rochester; Charles E. Colton, Syracuse; E. A. Curtis, Fredonia; O. W. Dryer, Rochester; Jay Fay, Rochester; O. K. Foot, Rochester; Frederick L. Gouge, Utica; E. A. Kent, Buffalo; Thomas Nolan, Rochester; J. H. Pierce, Elmira; Charles R. Percival, Buffalo; Jesse R. Porter, Buffalo; H. G. Tuthill, Corning; W. W. Taber, Syracuse; W. C. Walker, Rochester.

The meeting was called to order by President W. W. Carlin, of Buffalo, who addressed the convention reviewing the work of the chapter during the year, spoke at length regarding the state license bill and the work of the national, state and local societies. Mr. Carlin called attention to the necessity for every architect to use his influence with local representatives and the public generally, so that a strong sentiment in favor of the licensing bill should be formed before it came before the state legislature for passage.

At the conclusion of the president's address and the reports of the treasurer and committees had been received, that upon the bill for licensing architects was taken up and the discussion occupied the remainder of the morning session.

At the afternoon session the following officers were elected for the year: President W. W. Carlin, of Buffalo; secretary, J. H. Pierce, of Elmira; treasurer, George W. Baxter, of Syracuse; first vice-president, Cyrus K. Porter, of Buffalo; second vice-president, J. R.

Church, of Rochester; executive committee — E. A. Curtis, of Fredonia, and Orlando K. Foote, of Rochester.

A paper on "The Transition of the American Dwelling House" was read by C. K. Porter, of Buffalo. The executive committee, before whom the project of consolidating the Buffalo Chapter with the State Chapter had been placed for consideration, reported in favor of such consolidation. In the discussion following the report, an equitable plan could not be arrived at and the entire matter was referred to a special committee to present a plan at the next session. The Chair appointed C. K. Porter, J. H. Pierce, E. A. Curtis, F. H. Gouge and Jay Fay as such committee, and the session adjourned.

A banquet was given in the evening at the Rochester Club, Thomas Nolan, of Rochester, acting as toastmaster. Letters and telegrams of regret were received from Chancellor Sims and Professor Comfort, of Syracuse University; Professors C. Francis Osborne and Charles H. Babcock, of Cornell University; President Hill, of Rochester University; L. P. Ross, George Moss, E. T. Curtis, Senator Parsons, E. R. Willard, Mrs. Louise Bethune, of Buffalo, and R. C. McLean, of Chicago.

The first toast of the evening, "Architectural Associations," was gracefully responded to by W. W. Carlin; "The Architects and the Mechanics' Institute," by Ezra R. Andrews. S. H. Lowe, of the *Morning Herald*, responded to "Architecture and the Press," and referred to the similarity between honest architecture and honest journalism. J. Harry Stedman, in responding to "Architecture and Poetry," gave a sample of what he knew of both in the following:

Of the various vocations that absorb the human mind,
The Architect's profession is the most peculiar kind.
An office and a shingle are essential things no doubt,
But several other factors help to round the practice out.

Mechanical ability a set of plans to make,
Artistic sense to work them up so they are sure to take.
Preliminary estimates at maximum prepared
That will foot up so little that the client won't get scared.

Some knowledge of surveying, that he may lay out the land,
The lines and grades electing where the edifice shall stand.
In "ancient lights" and "real estate" he must be quite at ease,
Not to mention landscape gardening, sidewalks, sewers, shrubs and trees.

Then he must cope with coping and everything discussed,
And know much more of fencing than how an arch will thrust.
Clairvoyant he must be to know before the work's begun
Exactly how the thing complete will look when it is done.

Au fait in all materials, in every kind of stone,
Which best will hang together, and which will stand alone.
Not stuck on stucco, but in clays familiar as a potter,
And be on terra firma when he talks of terra cotta.

Then, he must pile up harmony, both presto and andante,
And take care of his capital when he puts up his ante.
He must be fully posted on his heating and his frieze,
And the lining of his architrave must not bag at the knees.

His members, frames, groins, ribs and feet would puzzle any doctor;
His attics and his lofty forms electrify the Proctor.
No laundress or musician knows so much as he of fluting;
His moldings way up to O G, as well as his mail-chuting.

Slate, tiles, conductors, shingles, tin, eaves, cornices and flues,
Paints, oils, stains, putty, fillers, glass, the finishes they use;
Acoustics, optics, papers, paint, interior decoration;
Distempers, dog-teeth, dados, plumbs, jamps, beads of every nation.

There's tensile strength and crushing strain and fireproof construction;
Plumbing and gas, electric work and ventilating suction;
Lime, mortar, plaster, cement, bricks, locks, bolts, door-closers, hinges
And with each peculiar client know just where the shoe impinges.

Boilers and fuel, pipes, exhaust, the fastest elevator;
Cold storage as embodied in the Wickes Refrigerator;
Ranges and grates and furnaces, the principles of Ruskin;
The better points of every school, Assyrian, Greek, Etruscan.

Stair-builder! mason! carpenter! designer! what a head!
'Tis marvelous that "Fools rush in where angels fear to tread."
He gives his best for perfect work, and when he's done it all,
He finds his labor is in vain, "that closet is too small."

"Architecture and the Ladies" gave Mr. Foster Kelly an opportunity to show a familiarity with each, and John H. Coxhead, of St. Paul, in speaking of the "Progress of Architecture in the West," spoke of the vigor of the examples shown in that section as against the superior fineness in execution displayed in the East.

Otto Block and Thomas Nolan, the committee on entertainment, left nothing to be desired in providing a thoroughly enjoyed dinner.

Chicago Architectural Sketch Club.

THE annual banquet of the Chicago Architectural Sketch Club took place on Monday evening, November 16. All active members of the club were present; also the majority of honorary and associate members were in attendance. The dinner was served in the assembly hall of the club rooms, which, although commodious in the past for entertainments, is now hardly adequate for this use owing to the rapidly increasing membership. The walls were covered with drawings showing the representative merit of active members, interspersed with casts, art loans, etc. The Clark medal competition drawings were also exhibited, which were premiated as follows: First place (gold medal), George G. Will, Omaha, Nebraska; second place (silver medal), Walter E. Pinkham, San Francisco, California; third place, F. R. Hirsh, New York; fourth place, M. G. Garden, Chicago; fifth place, F. H. Briggs, New York; sixth place, F. C. Baldwin, Detroit; seventh place, Adolph Thule, Omaha, Nebraska; eighth place, C. M. Olsen, Omaha, Nebraska. The officers for 1892 were formally installed in office by ex-President W. G. Williamson as follows: Charles A. Kessell, president; W. E. Kleinpell, first vice-president; Arthur Heun, second vice-president; John E. Youngburg,

secretary; Ernest J. Wagner, treasurer; executive committee — Frank L. Linden, T. O. Fraenkel. The dinner being disposed of, coffee and cigars were enjoyed while the following toasts were responded to: "The World's Columbian Exposition," C. B. Atwood; "The Present Company," Lorado Taft; "The Prevailing Style," Dankmar Adler; "The History of Architecture," Fritz Wagner; "The Sphinx," W. L. B. Jenney; "The Draftsman Off Duty," I. K. Pond.

In consequence of a judicious sampling of famous vintages during the disposal of an elaborate menu, the toasts were responded to "humorously," as a matter of course. Recitations and club songs, exhilarated by "Punch a la Fritz," concluded the programme of the most notable event in the club's history.

The first business meeting of the current year was held November 13. The syllabus for the coming year was discussed and plans formulated for the coming year of work and recreation. There will be frequent and valuable papers from experts in the various branches of building materials and methods, who have been engaged for the lecture course, a feature that will be of much practical benefit to the members. A large and inviting course of competitions will be selected, and interspersed between these and the lectures will be informal entertainments to which the friends of members will be invited and for which the new club rooms in the Athenæum building are well adapted. Sketching trips into the surrounding country will be organized for the summer and on the whole there seems to be more enthusiasm prevalent in the club than ever before in the club's history. There are suggestions of an illustrated catalogue next year and many other improvements in the club's proceedings and purposes that will make the year a memorable one in club history.

Ohio Chapter, A. I. A.

AN adjourned meeting of Ohio Chapter of American Institute of Architects was held during the sessions of the convention of the American Institute of Architects in the new library building, Boston, Massachusetts, at 10 A.M. October 30; Vice-president J. W. McLaughlin in the chair; George W. Kramer, secretary. The members present were J. W. McLaughlin, J. W. Richardson, G. W. Kramer, J. W. Yost, Guy Tilden, John H. Boll, G. W. Drach, Boucherle, F. A. Coburn, G. W. Rapp, Samuel Hannaford, J. M. Freese, E. O. Fallis, R. C. McLean.

On motion, the reading of minutes of meeting held in Akron was dispensed with, the same being approved as published in THE INLAND ARCHITECT.

Mr. Yost offered the following resolution:

Resolved, That a committee of three be appointed authorized to prepare a definite plan or arrangement in regard to dues, privileges, and relations which shall exist between state and local chapters, their report to be offered as an amendment to the constitution and by-laws, and shall be determined by letter ballot at as early a date as practicable and in such manner as is provided for by the constitution and by-laws.

The resolution was discussed and adopted, and on motion by Mr. Coburn it was determined that the next regular meeting should be held in Columbus, and that all officers be hereafter selected without reference to place of holding meeting.

The Chapter then proceeded to ballot for officers for the year commencing January 1, 1892, which resulted as follows:

J. W. McLaughlin, of Cincinnati, president.

J. W. Yost, of Columbus, first vice-president.

G. W. Rapp, of Cincinnati, second vice-president.

G. W. Kramer, of Akron, secretary.

E. O. Fallis, of Toledo, treasurer.

Executive Committee — J. W. McLaughlin, of Cincinnati, chairman; G. W. Kramer, of Akron, secretary; F. A. Coburn, of Cleveland; S. Hannaford, of Cincinnati; G. W. Drach, of Cincinnati.

On motion of Mr. Rapp, the badges left over from the Cincinnati consolidation convention were ordered turned over to the treasurer to be disposed of.

On motion, the meeting adjourned to meet in Columbus the third Thursday of August, 1892, unless otherwise ordered by the Executive Committee.

Association Notes.

DUNDEE INSTITUTE OF ARCHITECTURE.

The eighth session of the Dundee Institute of Architecture, Science and Art was opened on November 4 in the hall of the Young Men's Christian Association by Prof. G. Baldwin, M.A., Edinburgh, who delivered a lecture on "Some Notes on the Growth of Cities." The president, Mr. Charles Ower, C. E., occupied the chair, and there was a fair attendance.

Professor Brown began his lecture with a detailed account of Old Dundee, and explained its topography by the help of a lime-light view of the city from the slopes of the Law and a reproduction of Crawford's eighteenth century plan of the town. Though there were three eminences round the city, the Steeple seemed to have been the citadel from which enemies were kept at bay, the ordnance being fired from the windows at the top of the lofty structure. Professor Brown proceeded to say that there were two kinds of city—the old and the new; the old city which grew up irregularly, just as nature prompted, and the new city, which was laid down according to a regular plan. In Dundee they had no striking contrast between the old and the new city, and perhaps the most notable instances in Britain were to be found in Edinburgh and in Bath. This led the lecturer to speak of the rectangular planning of Edinburgh, and to say that that feature was conspicuous in ancient Greece. Old cities were laid out with a view, not so much to the convenience of the inhabitants, as to the keeping of enemies at a distance. In addition to the rectangular there was the radiating principle of forming cities, branching out from the center

after the manner of spokes from a wheel, and this plan was seen to advantage in Paris. Referring to the mediæval and classical (or regular) styles of architecture, he said that, while with the one they secured charm, picturesqueness and variety, with the other they got dignity and stateliness. A large number of views were shown as illustrating the points of the lecture, and, in conclusion, capital pictures of the Dundee Town Hall and the Morgan Hospital were exhibited. In regard to the Town Hall, he remarked that while one might wish to see a grander building, one would, at the same time, desire to retain its massive and substantial appearance.

The Chairman proposed a vote of thanks to the lecturer; and Professor Brown, in acknowledging, alluded to the naturally fine situation of Dundee, and said there was scope for the formation of a beautiful city in the West End district.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

The Seventh Annual Exhibition of the Architectural League of New York will be held at the Fifth Avenue Art Galleries, 366 Fifth avenue, New York, and will be open to the public after December 24, under the following rules and conditions:

1. The exhibition will be open to the public on Thursday, December 24, 1891, and will be open until January 9, 1892.

2. The galleries will be open for the reception, by card, December 23—Press: 10 A.M. to 4 P.M.; and reception in the evening.

3. The exhibition will consist of drawings, etc., not before publicly exhibited in New York, representing as far as possible the present condition of architecture and the allied arts. All kinds of works are admissible, such as: architectural designs embodied in plans, elevations and sections, or shown in perspective. Designs for decoration, furniture and the like. Photographs of executed work. Cartoons for stained glass, full-size drawings for ornament and the like. Models of executed or proposed work. Completed work, such as carving in stone or wood, wrought iron, mosaic glass, stuffs and furniture. Sketches, drawings and paintings of architectural or decorative subjects.

4. Works will be received only at the Fifth Avenue Galleries on the 16th and 17th December, 1891. No works will be received before or after that date.

5. If the secretary is notified on or before the 14th December drawings will be called for and returned without expense to the exhibitors. Collections to be made the 16th and 17th of December.

6. The blank form attached to this must be filled and sent to the secretary by the 14th of December.

7. A card must be attached to the back of each drawing or exhibit, giving the title, name of exhibitor, the address, and where to be returned.

8. All works intended for exhibition will be at the risk of the owners.

9. All rules customary at exhibitions, and not above mentioned, will be considered to apply equally to this exhibition.

47 West Forty-second street.

EDWARD T. HAPGOOD, Secretary.

All drawings and photographs must be framed or mounted. Exhibits will be catalogued by title with name of exhibitor, and it is especially desired that the name of the draftsman may appear; any other data may be on margin.

THE PHILADELPHIA T-SQUARE CLUB.

The opening meeting of the T-Square Club for the season of 1891-92, was held October 7, when the following officers were elected for the ensuing year: President, John Stewardson; vice-president, Frank E. Mead; secretary, C. Barton Keen; treasurer, Albert Kelsey; Executive Committee—F. M. Day, Wilson Eyre and Frank A. Hays. over two hundred and fifty drawings were submitted, was reported.

The competition of the Club, "Sketches From Nature," in which upon by the adjudicating committee, as follows:

REPORT OF JURY.

Frank A. Hays, Esq., President Philadelphia T-Square Club:

DEAR SIR,—The committee selected by the T-Square Club of Philadelphia to award the prizes for summer sketches begs to submit the following report:

The committee found the general standard of work, considered as the production of architectural draftsmen in their leisure hours, gratifyingly high. Some of the work is very commendable, and almost all shows serious effort. There is, perhaps, too much tendency to impressionistic and picturesque method, and too little accurate and delicate study of form, though some of the drawings of architectural detail are very good. The figure drawing is quite insufficient.

In awarding the gold medal for the "best general exhibition," it was found that few of the exhibitors had work in all three mediums (water-color, pen-and-ink and pencil and crayon), and none of them showed sufficient skill in all to merit the medal on that ground. It was, therefore, decided to award the medal for general artistic merit and skill, and versatility in subject matter as well as in material, and on this ground the gold medal is awarded to Mr. J. J. Bissinger, whose pen-and-pencil sketches of animals and of architectural detail are admirable. His animals are especially vigorous and truthful.

The silver medal for the best water-color sketch the committee had no difficulty in awarding to Mr. E. Boggs, whose drawings show a breadth of handling and justness of tone unapproached by the other exhibitors.

The silver medal for the best pen-and-ink sketch is awarded to Mr. Frank A. Hays, whose work shows much delicacy and feeling for line, and, with the bolder work of Mr. Bissinger, is the best in the exhibition.

The silver medal for the best pencil or crayon sketch is awarded to Mr. Charles Klaunder for a graceful and charming drawing, excellent in technique and in expression of air and distance, as well as of form. Mr. Klaunder also deserves mention for the somewhat timid but delicate and truthful water-color drawing of landscape.

All of which the committee respectfully submits.

KENYON COX,
STANFORD WHITE.

An opportunity to visit Canada is offered by the Chicago & Grand Trunk Railway. Commencing Monday, December 21, and continuing until and including the 23d, the C. & G. T. R'y will sell excursion tickets to principal points in Canada at the low rate of one fare for the round trip, good to return up to and including January 9, 1892. The Great St. Clair Tunnel, under the St. Clair River, between Port Huron, Michigan, and Sarnia, Ontario, connecting Canada with the United States, will be open for passenger traffic at that time and only the passengers via the C. & G. T. will be taken through this tunnel. It is the greatest submarine tunnel in the world; it is a continuous iron tube of over a mile in length, which together with the approaches on each side makes over two miles. It was constructed at an expense of nearly three million dollars and is well worth seeing as well as the advantages which the continuous route offers in the way of avoiding the delay and inconvenience of the old method of crossing the river on the ferry. The C. & G. T. is the only line operating Pullman cars to Canada; it is known as the Pullman and dining car line. Its advantages for Canadian travel over all competitors are too many to be enumerated.

Our Illustrations.

Hotel McCasland, East St. Louis, Illinois; J. Harry Randall, architect, St. Louis, Missouri.

St. Paul's P. E. Church, New Orleans, Louisiana; McDonald Bros., architects, Louisville, Kentucky.

Competitive Design for the Union Station, St. Louis, Missouri, submitted by George R. Mann, architect.

Competitive Design for the Union Station, St. Louis, Missouri, submitted by James Stewart & Co., architects.

Gothic Capital—Refectory—St. Martin des Champs—Capital from Reims Cathedral—Façade of Reims Cathedral, in illustration of article, "Architecture and the Allied Arts," in this number.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residence of C. S. Kilbourne, Aurora, Illinois; W. A. Otis, architect, Chicago.

Residence of W. A. Alexander, Highland Park, Illinois; W. W. Boyington & Co., architects, Chicago.

The Fourth Baptist Church, corner Ashland Boulevard and Monroe street, Chicago; Charles F. Whittlesey, architect.

Residence of H. M. Wood, Chicago; S. S. Beman, architect.

Residence of Edmund Adcock, Chicago; George Beaumont, architect.

Residence No. 133 Astor street, Chicago, for Eugene R. Hutchins; Pond & Pond, architects. Three full-page plates are given as follows: Exterior view; view in dining room; view in library.

Correspondence.

Editors Inland Architect: ROME, Georgia, November 30, 1891.

I want illustrations of Venetian palace architecture; interior and exterior. Where can I get them and what will they cost?

Respectfully, J. G. BARNNELL.

Brochure No. 2, issued by *Technology Architectural Review*, Boston (10 cents), gives six exteriors of palaces; photographs of exteriors may be had of O'Brien & Son, Chicago, or Soule Photograph Company, 338 Washington street, Boston. Details in Ruskin's "Stones of Venice." Viollet le Duc's "Discourses," volume II, chapter XVII, gives interior perspective and plans of one palace.—EDITORS INLAND ARCHITECT.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT, }
CHICAGO, December 10, 1891. }

The results of the year's business in architectural interests and in general building and construction work have been satisfactory to conservative minds. Present indications point to an increased activity next year, because of large crops for which there is a good demand at reasonable prices, a heavy and remunerative railway traffic, an increasing agricultural area, a healthy condition in the manufacturing, mining and lumber interests, and a fairly satisfactory condition of the money market. While the exact relations between the volume of money and a vigorous and healthy condition of trade is not very well understood by business men, there is a feeling that leans strongly toward a more abundant supply of currency, which, of course, it is desired should possess the greatest stability and regularity as to value. The existing trade and manufacturing conditions are all favorable. Railroad earnings, in consequence of the extraordinary freight traffic, are increasing. Manufacturers are feeling some benefits already. Money is abundant at financial centers, but rather stringent elsewhere. If there has been any falling off in building activity in large cities, it has been fully compensated in smaller cities and towns. Building material has continued all year at reasonable and steady prices. Lumber is in abundant supply, and the camps will soon be alive with industrious workmen. The West and Northwest is steadily opening up, and enlarging markets are being established throughout that region. Production is being kept well in hand throughout the manufacturing East, but competition is keenly felt in all channels. Opportunities for crowding prices upward are fewer and more risky than a few years ago. It is probable that there will be next year greater activity in railroad building. Indications all point to a steady trade during the winter. Capital has been unusually cautious for the past year, but confidence is today stronger and the strength of the business situation has been satisfactorily demonstrated. Low and steady prices, reasonable rates for money, low-priced building material and a good earning capacity of the masses, all unite to justify a favorable view as to the probabilities of 1892.

Synopsis of Building News.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Baltimore, Md.—Architect J. B. Wyatt has prepared plans for a four-story Athletic Club building; to cost \$125,000.

The Baltimore Medical College are having plans prepared for their new building. It is to be six stories high and cost about \$30,000.

Buffalo, N. Y.—Architect W. H. Archer has just completed plans for a new rectory for St. Patrick's Church at Java Centre, New York, said building to be 32 by 62 feet, two stories and basement, frame, classic in style, shingle roof, spacious verandas, reception room, kitchen and scullery. On second floor are situated six chambers, bath room and tank. Servants' rooms are on third floor, whitewood natural finish throughout, modern conveniences, hot-air heating, plate and other glass. Also he has prepared plans for seven depots for the Buffalo, Tonawanda and Niagara Falls Electric Railroad; and for office fittings, light shafts and lavatories for Messrs. Howard Bros.' building, Washington street, Buffalo, New York.

Chicago, Ill.—Architects J. E. & J. P. Doerr: For J. A. Duher, a three-story and basement store and flat building, 24 by 60 feet in size; to cost \$10,000; it will be erected on Calumet avenue near Twenty-ninth street; the front will be

constructed of Bedford stone. For L. C. Meckel, on Thirty-ninth street near Cottage Grove avenue, a double two-story store and flat building; to cost \$12,000; pressed brick and stone front. Also making plans for remodeling a three-story building situate on Wabash avenue near Fourteenth street, into a modern four-story store and flat building.

Architect William Thomas: For Dr. H. B. Skiles, on Polk street near Francisco street, a three-story flat building, 50 by 60 feet in size; to cost \$10,000; to be of pressed brick and stone front with gravel roof.

Architect Henry Ives Cobb: For W. D. Boyce, at 112 to 114 Dearborn street, a twelve-story office building, 40 by 90 feet in size; to cost \$200,000. For the Hartford Deposit Company, at 138 to 144 Dearborn street, a twelve-story office building; size 92 by 50 feet; to cost \$300,000.

Architect E. H. Turnock: For H. B. Parker, at La Grange, four two-story frame residences; to have stone basements, furnaces, etc. For Frank O. Day, at Ridgeland, a two-story frame dwelling; to have stone basement, sanitary improvements, furnace. For Brace & Winchell, at Waukegan, two two-story and basement frame residences; to have stone basements, furnaces, and all the sanitary improvements.

Architect R. C. Berlin: For William J. Voltmer, Jr., on Oakdale avenue near Halsted street, a two-story and basement flat building; to have a Bedford stone front.

Architects Blitz & Marshall: For S. T. Warner, at Austin, a two-story frame residence in the Colonial style of architecture; to have stone basement, stained and plate glass, furnace, etc. For George F. Wissack, on Washington boulevard west of Wood street, a five-story apartment house, 75 by 80 feet in size; to cost \$60,000; the first two stories will be of granite, and above this will be of pressed brick with stone trimmings, copper bays and gravel roof.

Architects Mayo & Curry: For J. F. Keeney, at Washington Heights, a two-story hotel, size 30 by 60 feet, to be of pressed brick and stone front. For the Stager Manufacturing Company, at Washington Heights, a three-story factory, 40 by 125 feet in size, to be of mill construction, common brick and gravel roof. For J. F. Keeney, at Thirty-fifth street and Michigan avenue, a seven-story apartment house; to cost about \$300,000; it will be constructed of buff-colored Roman pressed brick, with Bedford stone and terra cotta trimmings. For A. H. Black, corner of Twenty-second street and Cottage Grove avenue, a seven-story hotel, 97 by 126 feet in size; to cost \$90,000; it will have two fronts of light-colored pressed brick, with terra cotta and Bedford stone trimmings. For J. G. Cozzens et al., corner of Lake avenue and Forty-seventh street, a seven-story apartment house; to cost about \$225,000; the first story will be of stone, and above this will be of pressed brick and stone.

Architect D. A. La Pointe: For George T. Stoneham, on Adams street, near Western avenue, a three-story flat building, to be of Bedford stone front.

Architect J. H. Moore: Made plans for the Trinity Reformed Church, to be erected at 434 to 438 Marshfield avenue; it will be constructed of Indiana pressed brick, with variegated Portage brown stone trimmings, copper cornice and slate roof.

Architects Holabird & Roche: For the Brooks estate, at 194 to 210 Dearborn street, a sixteen-story office building; to cost \$600,000. For Francis Bartlett, at 82 Van Buren street, a sixteen-story building; to cost \$600,000. For Byron L. Smith, on the southwest corner of Michigan avenue and Washington street, a sixteen-story office building; to cost \$800,000.

Architect D. H. Burnham: For David E. Bradley, at 79 to 83 Jackson street, a sixteen-story office building, 81 by 165 feet in size; to cost \$600,000. For L. G. Fisher, at the northeast corner of Dearborn and Van Buren streets, an eighteen-story office building, to have two fronts of stone, pressed brick and terra cotta.

Architects Holabird & Roche: For the Marquette Building Company, at 266 to 274 Dearborn street, a sixteen-story office building; to cost \$900,000.

Architects Wilson & Marble: For M. Martin, on Ellis avenue, near Fiftieth street, four three-story and basement residences, to have stone fronts, slate roof, etc., and cost \$60,000. For Albert Mendel, on Michigan avenue, corner of Forty-fourth street, a three-story residence, to be constructed of stone on two sides; have hot-water heating, electric light, stained, plate and beveled glass, hardwood finish, slate roof, etc.

Architect O. J. Pierce: For Thomas P. Hicks, on the southwest corner of Wellington and Sacramento avenues, a two-story and basement residence, to have a stone front, slate tower, hardwood finish, gravel roof, hot-water heating, etc. For James Todd, at Batavia, Illinois, a two-story frame house.

Architect W. T. Leshner: For A. W. Keeney Transfer Company, on Aberdeen street, south of Harrison, a three-story flat building, stable and office, size 25 by 110 feet; to cost \$13,000. For William Flannagan, at Thirty-seventh court and Halsted street, a three-story flat building of pressed brick and stone front; to cost \$25,000. For P. J. Riley, on the north side, a two-story flat building, of pressed brick and stone. For A. A. Chichester, on Bowen avenue, near Vincennes, a three-story flat building, of stone front, hardwood finish, steam heat, copper bays and cornice, electric light, etc.

Architect H. H. Sprague: For J. L. Cochran, at North Edgewater, twelve two-story basement and attic residences, to be of frame with stone basements, gas fixtures, furnaces, etc. For E. S. Jackman, at Edgewater, a pretty two-story basement and attic residence, of stone basement and frame, to have hardwood interior finish, gas fixtures, furnace, and the best of sanitary and modern conveniences.

Architects Treat & Foltz: For Graeme Stewart, on the southeast corner of Wabash avenue and Forty-third street, a four-story and basement flat building; size 80 by 100 feet; cost \$55,000. The front will be of Bedford stone, and the interior will be finished in hardwood with marble and tile work.

Architect D. A. Blythe: For J. C. Green & Co., on the southwest corner of Leland avenue and Wolcott street, Ravenswood, four two-story frame residences; to have brick and stone basements, sanitary improvements, furnaces, etc. For E. A. Somers & Co., on the northwest corner of West Ravenswood Park and Leland avenue, four two-story frame residences; to have stone basements, partly hardwood finish, all the sanitary improvements, furnaces.

Architects Edbrooke & Burnham: For Isaac & Max Wolf, on Forestville avenue and Forty-third street, a block of five two-story residences; to have buff Bedford stone fronts; cost \$35,000.

Architect A. Druiding: For Ellingwood, Kansas, a Catholic church, 55 by 120 feet in size; to be of pressed brick and stone and have a tower 140 feet high with slate spire, the interior to be finished in oak and have handsome stained-glass windows; the cost will be about \$25,000. For Toledo, Ohio, he made drawings for a Catholic church, 187 by 77 feet in size; to be constructed of stone or granite all round, with polished granite columns and marble caps; the interior will be finished in oak richly decorated and the ceilings in oil colors. The building will be heated by hot water, and the organ will be worked by water power or electricity; handsome stained-glass windows, marble work, and all the improvements will be put in. The transept will be 112 feet wide, and there will be a tower 236 feet high. This will be the finest church in the state. For Moorhead, Wisconsin, he made plans for a pretty church 45 by 90 feet in size; to be constructed of brick and stone and have a tower 120 feet in height. For Swan River, Minnesota, he made drawings for a Catholic church, 55 by 122 feet in size, with tower 145 feet high; to be constructed of pressed brick and stone, with slate spire. For Rev. Hoogstoel, at Tomahawk, Wisconsin, he planned a two-story and basement residence; to be of pressed brick and stone, with all sanitary and modern improvements, steam heat.

Architect H. D. Safford: For W. N. Coney, at 30, 32 and 34 Bryant avenue, three two-story, basement and attic residences, to have Amherst cut stone fronts, slate and gravel roofs, sanitary specialties, furnaces, etc., and cost \$17,000.

Architect Swan Linderth: For Andrew J. Lundin, at 5616 Wright street, a three-story flat building, to have stone front, gravel roof, and cost \$10,000.

Architects Beers, Clay & Dutton: For Memphis, Tennessee, a three-story schoolhouse, 60 by 80 feet in size, to be of pressed brick and stone front, with slate roof and cost \$25,000. For Noah Barnes, on the northwest corner of Jefferson avenue and Fifty-first street, five three-story residences of Anderson pressed brick and stone fronts, to cost \$40,000. For C. J. Adams, of Boston, a four-story flat building, at 3535 Indiana avenue, to cost \$25,000. For J. Foster Rhodes, on Michigan avenue and Thirtieth street, a ten-story hotel 100 by 120 feet in size, to cost about \$500,000. The basement and second story will be of Bedford stone, and above this will be of light-colored pressed brick and terra cotta. It will be of fireproof construction and have steam heat, electric light, elevators, marble and tile work, etc.

Architects Hetherington & Warner: For W. Ryan, on Washburn avenue and Throop street, a four-story and basement flat building, to be of St. Louis pressed

brick and Bedford stone; to cost \$12,000. For the same owner, at 72 Thirteenth street, a handsome two-story residence, of Bedford stone front, hardwood interior, stained and plate glass, gravel roof.

Architect L. B. Dixon: For J. Ogden Armour, on Michigan avenue and Thirty-seventh street, a two-story cellar and attic barn, 46 by 80 feet in size, to be of stone all round and have a roof of Spanish tile; cost \$25,000.

Architect M. E. Bell: For Springfield Illinois National Bank, a six-story fire-proof building to cost \$64,000. For Otis Humphrey, at Springfield, Illinois, a two-story frame residence, to cost \$7,000. For M. Hodgson, at Springfield, a two-story residence. For M. A. McLowan, on Thirty-first street and Lake avenue, a two-story stone front residence.

Cincinnati, O.—Reported by Lawrence Mendenhall.—Building matters are practically at a stand-still. The season, as shown by the following figures, has been a good one:

Number of new buildings.....	878
Valuation of brick and stone buildings.....	\$3,280,850
“ “ frame “.....	834,950
“ “ alterations.....	419,300

Total value of improvements..... \$4,535,000

In the above list, it must be remembered, the amounts are those given by the contractors and owners when they take out the permits, and will not average more than two-thirds of the real valuation. At the end of the year a complete list of every improvement in the city during the year will be given. Carpenters are a little uneasy, but it is to be hoped that wiser counsels will prevail, and allow the goose to keep on laying her golden eggs.

Architect Henry E. Siter has prepared plans for the Cincinnati Board of Education for a school building addition to the Twenty-second District School, size 65 by 65 feet, three stories high; materials: pressed brick; furnace, tin roof, blackboards, seats, etc.; cost \$30,000. Also for Avondale (Cincinnati) School Board, a school room; materials: pressed brick, slate roof, blackboards, furnace, seats, etc. This will be a very fine sample of modern school architecture, and will cost about \$45,000.

Architect M. Rumbaugh has prepared plans for Mr. A. C. Campbell, Ashland, Kentucky, for a hotel, three stories high; materials: pressed brick, stone, tin roof, electric work, furniture, plumbing, gas, tiling, mantels, steam heat, etc.; cost \$25,000.

Architects S. Hannaford & Sons report a business block for William Hooper and others; materials: pressed brick, stone, tin roof, elevators, gas, plumbing, architectural iron, etc.; the building will be eight stories high, and cost probably over \$100,000. Also for the Schulte Sons & Co., a large factory, six stories high, 48 by 120 feet; materials: pressed brick, iron, stone, elevators, tin roof, gas, plumbing, etc.; cost \$50,000.

Architects Crapsey & Brown report for Hon. J. L. Morey, Hamilton, Ohio, a block of houses for stores and flats, 60 by 150 feet, three stories high; materials: pressed brick, stone, electric bells, gas, plumbing, grates, mantels, stained glass, etc.; cost \$30,000.

Architects Aiken & Ketchum report: For O. E. Peters (Peters Cartridge Company) a residence. Materials: pressed brick, stone, gas, plumbing, slate roof, blinds, stained glass, etc.; cost \$10,000.

Architect S. S. Godley reports: For Robert Mitchell, two residences; materials: frame, slate roof, blinds, gas, plumbing, mantels, stained glass, hardwood finish, etc.; cost \$10,000. Also for George A. Prichard, Avondale (Cincinnati), a residence; materials: stone, slate roof, hardwood finish, gas, plumbing, stained glass, laundry fixtures, etc.; cost \$16,000.

W. W. Peabody, Jr., of Cincinnati, will build a residence at Madisonville, Ohio; materials: frame, slate roof, hardwood, gas, plumbing, stained glass, furnaces, etc.; cost \$6,000.

Architect A. O. Elzner has prepared plans for C. Boss, of the Gambrinus Stock Company, for a house; materials: pressed brick, stone, slate roof, blinds, furnace, stained glass, gas, plumbing, mantels, etc.; cost \$7,000. Also alterations to a residence for J. C. Small, Aurora, Indiana; materials: frame, blinds, gas, plumbing, stained glass, furnace, mantels, etc.; cost \$5,000.

Architect G. W. E. Field of our city has gone to Hot Springs, Virginia, to superintend the erection of a large hotel, for which he has drawn the plans. The hotel will be owned by the Chesapeake & Ohio Railroad Company, and will be first-class in every respect. Pressed brick will be used. We wish him well in his new field among the beautiful mountains of Virginia.

Architect John H. Boll has drawn the plans for a large distillery at Germantown, Ohio, and will give all particulars.

Architect Charles Diss has prepared plans for a large four-storied brewhouse, size 70 by 50 feet, for Henry Adams, Cincinnati; materials: brick, iron, tin roof, machinery, etc.

Cleveland, Ohio.—Architect A. Mitermiller: For Schlather Brewing Company, alterations and additions to third story, brick; cost \$20,000.

Architect S. R. Badgley: For O. Dubray, a three-story store and tenement frame building, size 68 by 80 feet; cost \$8,000.

Architect V. E. Gregg: For the White Sewing Machine Company, a three-story factory, brick; size 40 by 200 feet; cost \$17,000; Huinkins Bros., contractors.

Architect John Eisenmann: For William Taylor & Son, a two-story frame stable, size 38 by 100 feet; cost \$7,000.

Henry Wick will build a two-story double frame dwelling; cost \$7,000.

John Mooney will erect a three-story store and tenement building, size 48 by 48 feet; cost \$3,300.

149 permits granted during November, frame.....	\$180,100
7 “ “ “ “ “ brick and stone.....	27,365
7 “ “ “ “ “ alterations and additions.....	56,040
234 “ “ “ “ “ Total.....	\$263,505

Detroit, Mich.—Architects Donaldson & Meier: For the Michigan Brass & Iron Works, a group of brick buildings including office building, machine shop, iron foundry and tool house; to cost \$55,000. For the Bagley Estate, a five-story building; size 162 by 120 feet; brick and iron construction; cost \$120,000. For William S. Rathbone, a two-story brick residence; cost \$8,000.

Architects Spier & Rolins: For the railroad branch of the Young Men's Christian Association, a three-story building on the corner of Junction avenue and Annexation street; size 40 by 75 feet; pressed brick and stone; cost \$10,000.

Architect George E. Depew: For Gray Brothers, a three-story brick carriage factory; cost \$8,000. Hollands & Son, contractors.

Architect Gordon W. Lloyd: For the Peninsular Savings Bank, additions and alterations to brick building; to cost \$30,000. For the Open Door Society, addition of a brick wing to their building; cost \$12,000.

Architects E. A. Walshe & Son: For Dinan Bros., four two-story brick residences; cost \$16,000.

Architect J. V. Smith: For C. J. Whitney, alterations and additions to brick residence on Woodward avenue, near Sprout; cost \$10,000.

Architects Nelson & Oldfield: For Wallace Bros., a three-story brick residence, cut stone trimmings and slate roof; cost \$8,000. For Frederick Ebel three two-story brick flats; cost \$7,500. For John Effelt, a two-story block, stores and flats; \$6,000. For William Evans, a two and one-half story residence, at Ypsilanti, Michigan, field stone and frame; cost \$8,000.

Architect George W. Meyer: For Martin and Mary B. Galvin, a two-story brick residence, on Charlotte avenue; cost \$9,000. For James Gourley, a two-story brick barn; to cost \$150,000.

Architects Mason & Rice: For William C. McMillan, a two-story brick residence, pressed brick and brownstone; cost \$50,000. For Lou Burt, a two-story double residence, on corner of Second and Canfield avenues; cost \$10,000. James Buchanan, contractor.

Architect Edward C. Van Leyen: For George T. Abrey, a three-story frame hotel; size 50 by 70 feet; cost \$7,500.

Architects John Scott & Co.: For the Detroit Club, revised plans of club house, to be built on Fort and Cass streets, four stories; size 70 by 130 feet; cost \$70,000.

Architect Harry J. Rill: For Our Lady of the Holy Rosary R. C. Church, addition to building; size 38 by 48 feet; cost \$5,000. For Henry W. Holcomb, a two-story brick terrace; to cost \$15,000.

Architects A. C. Varney & Co.: For John Edwards, a two and one-half story brick residence; cost \$7,000. For Lorenzo Carey, a three-story brick residence,

on Forest and Second avenues; cost \$7,000. For E. R. Smith, a two-story frame residence in Clinton, Michigan; cost \$5,000. For the Detroit Stay Company, a two-story brick manufacturing building; cost \$6,000.

Architect P. Dedericks, Jr.: For Max Broeg, Jr., a two-story frame residence; cost \$3,000.

Architects Malcombson & Higginbotham: For the Detroit School Board, a two-story brick addition, eight rooms, to Hancock school; size 36 by 120 feet; cost \$15,000.

Arthur H. Nelson and George C. Oldfield have associated themselves under the firm name of Nelson & Oldfield and taken offices at 49 Hodges Block for the practice of their profession as architects.

Louisville, Ky.—Architects Drach & Thomas report the following: Residence for W. A. Haas, Esq.; to cost \$8,000; located Garvin place, size of structure 30 by 48 feet, to have slate roof and heated by furnace and natural gas, exterior brick and stone trimmings. Residence for Mr. John Doerhoefer; to cost \$2,300; located Thirtieth and Chestnut, size of structure 32 by 46 feet, building to be frame and shingle roof. For Central Kentucky Lunatic Asylum, a storehouse, three stories in height, the upper portion to be used for attendant departments; to cost about \$9,500; size of structure 50 by 76 feet, to have metal roof, building of brick and stone trimmed, location, Lakeland, Kentucky. A boiler house, carpenter shop and pipe fitting department for same institution, to be three stories high, upper part used for attendant quarters, size of structure 50 by 75 feet, to be of brick and iron construction; cost \$24,000; both buildings to be heated by steam and have electric lights. Remodeling of opera house and stores at Owensboro, Kentucky; to cost \$20,000; to have steam heat, slate and metal roof, seating capacity one thousand, to have lodge rooms above. Bank building and store, to be located at Hartford, Kentucky, to be three stories, brick and stone, metal roof; to cost \$8,000; size of structure 30 by 80 feet.

Milwaukee, Wis.—The plans for the new government building have been drawn out, but are subject to change in details. The building will be of stone in the Romanesque style, three stories high, with high square tower nearly 60 feet above the roof.

Architects Leipold & Wiskocil are preparing plans for Linehan & McGrath, for four brick flats, on State, near Twelfth street; cost \$8,000.

Pittsburgh, Pa.—Architect A. Peebles: For Atwood & McCaffrey, a four-story machine shop; size 60 by 55 feet; frame, with tin roof; cost \$20,000.

Architect J. G. Frazier: For E. M. Smith, a three-story brick dwelling; size 36 by 71 feet; cost \$5,500.

Architect F. Osterling: For the Pittsburgh Times, an eight-story business building; size 100 by 172 feet; stone and brick asphaltum roof; cost \$230,000.

Architect J. W. Offerman is preparing plans for the Newsboys' Home, the building will be of stone; cost \$40,000.

Architect J. P. Brennan has prepared plans for W. A. Childs, for two-story and attic residence, at Homewood; cost \$7,500. Also preparing plans in competition for the Pennsylvania state building for the World's Fair; cost \$75,000. All material, iron, glass, etc., to be used in its construction, will be from this state.

In the Carnegie Library competition ninety-six designs have been submitted.

San Francisco, Cal.—Architect S. E. Fisher is preparing plans for the Alliance Club "Wigwam"; cost \$13,000.

Architect H. Burns: For James Lamping, a three-story flat building; cost \$10,000.

Architect L. S. Stone: For Charles Bancroft, a brick residence; cost \$6,000.

Architect M. J. Welsh: For J. W. Dunphy, at Milbrae, a brick residence; cost \$13,000.

Savannah, Ga.—Architect Percy Snyder: For W. F. McCauley, a two-story brick residence, size 26 by 54 feet; tin roof, terra cotta trimmings; cost \$6,000. For Jacob Paulsen, a three-story frame dwelling, size 30 by 62 feet; tin roof, hot-air heated, hardwood, parquet and tile finish inside; cost \$10,000. For the Cottage Club Company, Tybee Island, a frame club house and cottage, to cost \$6,000.

St. Louis, Mo.—Architect C. C. Helmers, Jr.: For A. Vorhauer, a three-story store and flat building, size 47 by 61 feet; brick and stone; cost \$10,000.

Architects P. F. Maegher & Sons: For Mr. Martin, a three-story residence, size 28 by 60 feet; brick, granite and stone; cost \$6,800.

Architect Theo. Rapp has prepared plans for G. Tomia, for a two-story residence, size 16 by 50 feet; cost about \$5,000.

Architect L. C. Bulkley has prepared plans for a three-story store and flat building, size 20 by 75 feet; brick and stone, slate roof; cost \$10,000.

Architects Foster & Ittner: For H. Feldbush, a two-story brick residence, size 27 by 50 feet; cost \$7,000.

Architect A. M. Baker has prepared plans for a three-story residence for R. F. Kilgen, size 32 by 52 feet; brick with stone foundation; cost \$15,000.

St. Paul, Minn.—Architect C. A. Wallingford reports: For George W. Shickley, an apartment house of six flats, corner of St. Albans and Dale streets, to be three stories in height, of stone and pressed brick, with usual modern appurtenances; to cost about \$15,000.

Architect C. A. Wallingford reports: Three frame houses for Cochran & Walsh, on Victoria street, near Marshall, to have all modern appliances, and to cost \$5,000 each; also a store building for W. H. Hilliard, on Selby and Victoria avenues, to be built of pressed brick with stone trimmings and hardwood finish; housekeeping flats above the first floor; to cost \$10,000.

L. D. Cushing reports: For the Boston Northwest Real Estate Company, a five-story brick steel-construction building for commercial purposes, on the corner of Sixth and Roberts streets; the exterior will be of plate glass, Perth Amboy buff brick, terra cotta and copper; the building is to be absolutely fireproof, and to have all modern improvements; the estimated cost is \$100,000, and the contracts for the building, which is to be finished before August, 1892, will be let this week.

Architects Omeyer & Thori report: For Dr. A. H. Mitchell, Deer Lodge, Montana, a \$25,000 brick veneer residence, with steam heat and other improvements; under construction. For William Coleman, Deer Lodge, a frame and brick veneer residence; to cost \$10,000. For Theodore Brantly, H. R. Whitehill and Edward Schanickow, Deer Lodge, three residences; \$5,000 each.

Architects Millard & Joy report: A railroad station for the Great Northern railway at Sauk Center, Minnesota, to be of brick, with a slate roof; estimated cost, \$7,000. Also a brick railroad station at Billings, Montana, for the Northern Pacific railway; to cost \$7,000, under contract. Also a residence for Charles H. Clark, on Holly avenue, near Mackubin; to be of frame, and to cost about \$9,000. Also a frame residence for George Thompson, on Laurel avenue, near Mackubin; to cost \$6,000.

Architect Albert Zschocke reports residences: For A. Giesen, on Dayton's Bluff, to be of brick and stone, with steam heat and all modern appliances, and to cost \$20,000; also a frame residence in the colonial style for Elis S. Warner, on Laurel avenue near Victoria; to cost \$5,500.

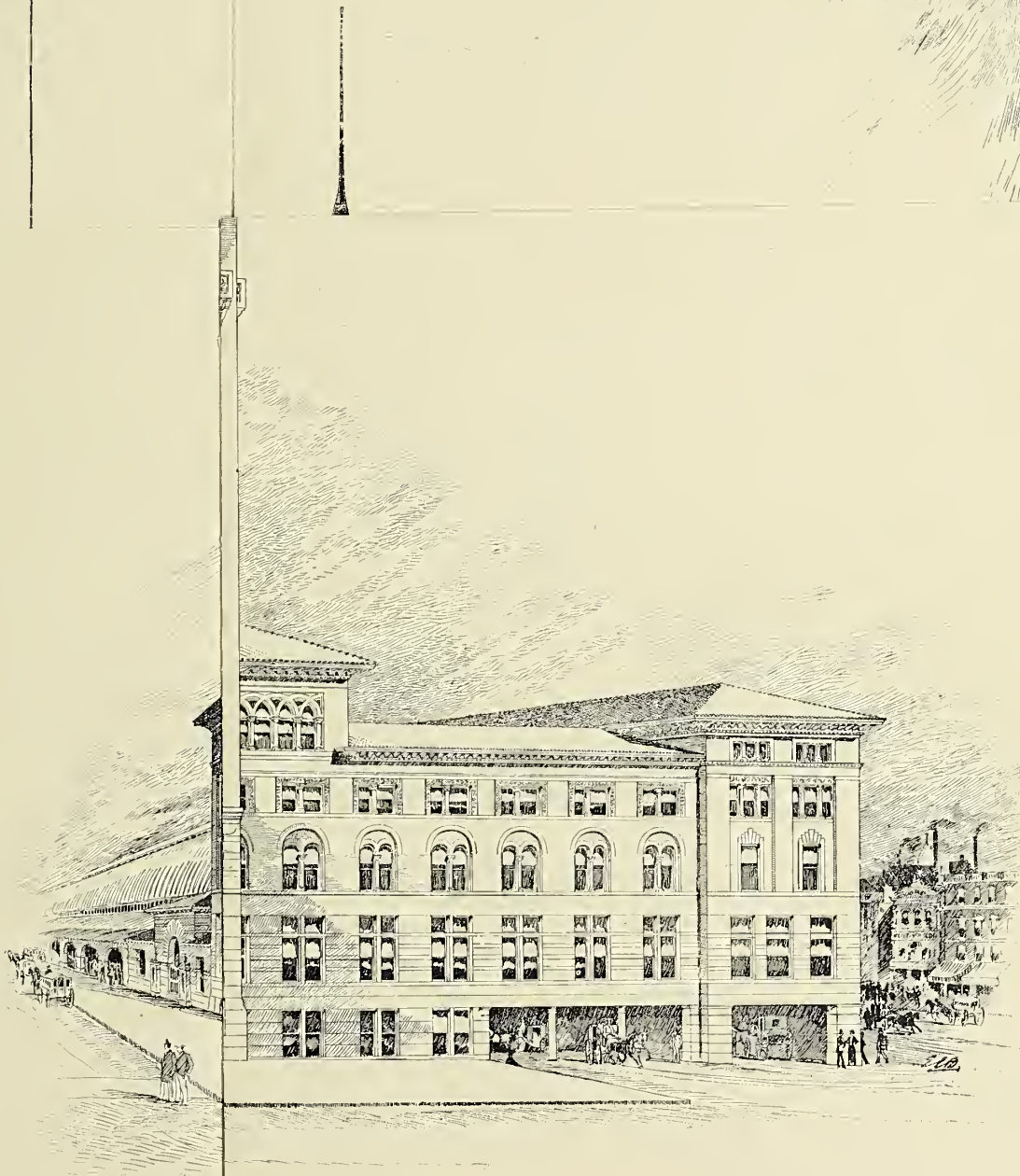
Architects Reed & Stem report plans for a medical college at the State University of Minnesota, to be built of stone and brick at a cost of \$60,000; fitted with steam heat and all modern appliances. Under contract. Also a brick and stone building for the Norwegian University of Madison, Wis., to have steam heat and modern improvements, and to cost \$20,000. The same architects are drawing plans for residences for J. H. Bunvell, a frame building on Summit avenue; to cost \$15,000. For A. W. Ritzinger, a frame house on Fairmont avenue; to cost \$8,000. For E. H. Hnbbell, a \$5,000 frame house on Grand avenue.

The Second National Bank will soon erect a five-story brick and terra cotta building fronting on Sixth and Robert streets, to cost \$100,000.

The St. Paul Electrical Manufacturing and Construction Company has commenced work on a brick factory building, 50 by 200 feet, on the West Side; to cost about \$15,000.

Permits have been issued within the past three weeks, for the following residences in St. Paul, to cost \$5,000 each: S. A. Bowme, on Winifred street near Bancroft; J. H. Healey, two houses on Marshall near Mackubin; Henry P. Barlow, Hagne near Chatsworth; George S. Heron, Marshall near St. Albans; Mrs. A. Bernerd, Sherburne Park; E. E. Woodman, Lincoln near Grotto; C. L. Kluckholm, Goodrich near Avon; J. R. Collins, Fairmont near St. Albans; B. Barber, Jessie near Magnolia; Henry Brown, Ashland near Chatsworth; J. Hanlon, Fairmont near St. Albans.

DESIGN SUBMITTED FOR
UNION STATION ST. LOUIS
BY "GRAY BRICK AND
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COMPETITIVE DESIGN FOR THE UNION STATION, ST. LOUIS, MISSOURI.
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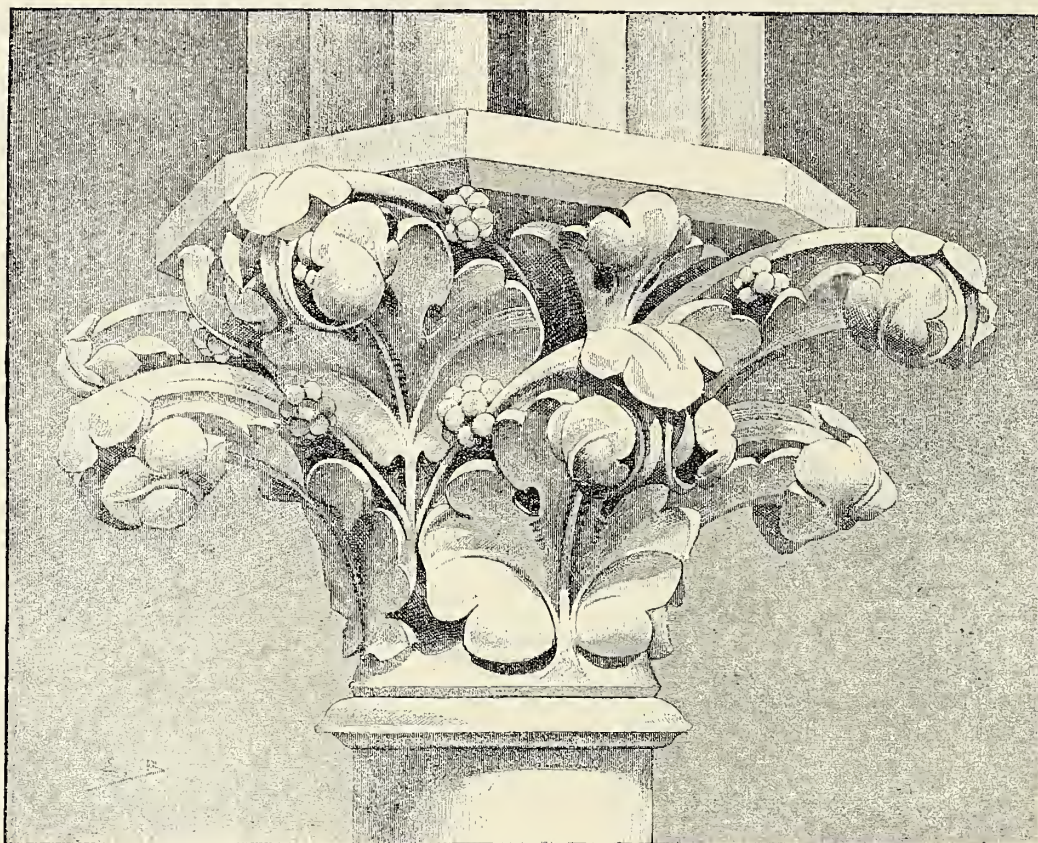


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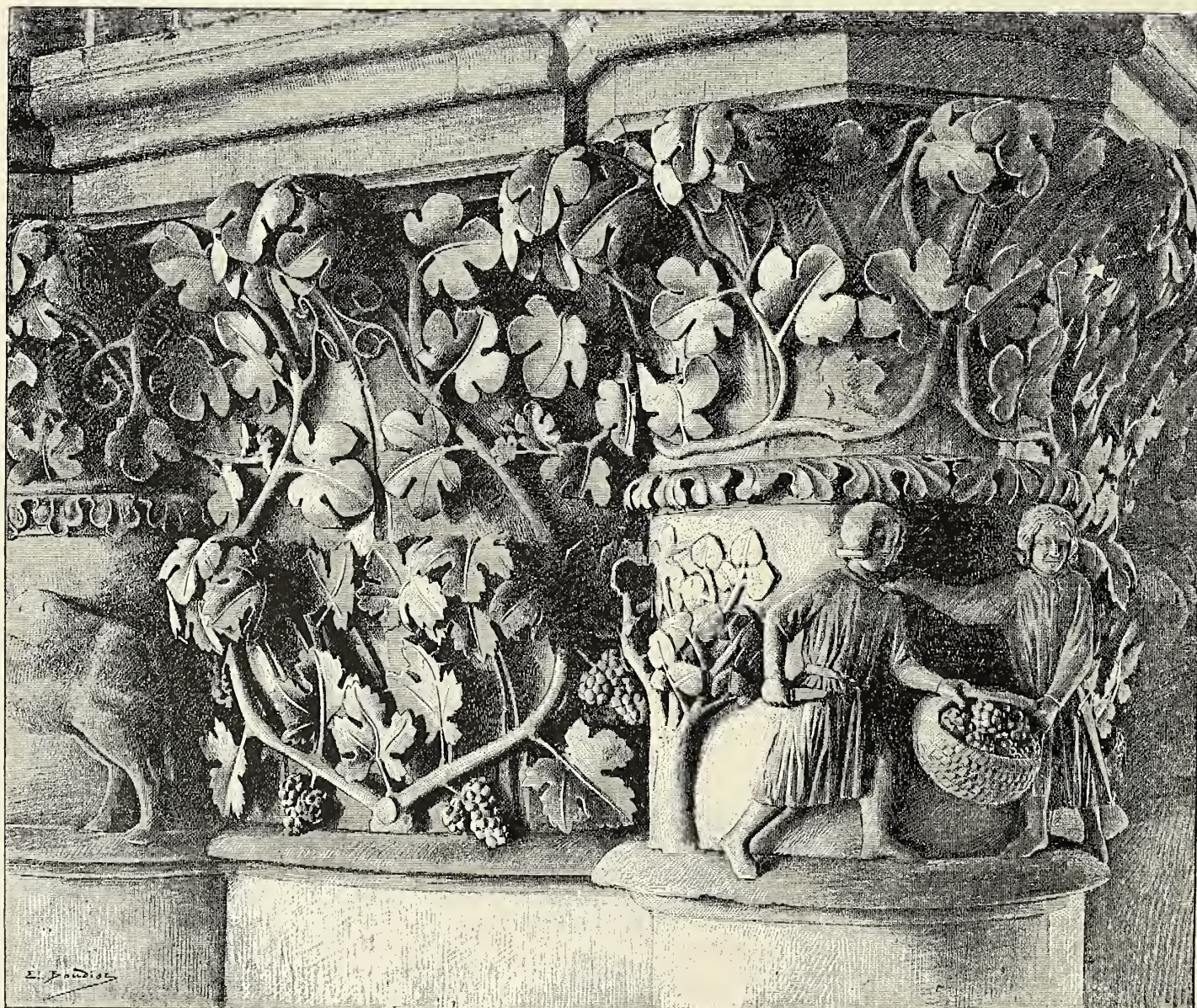


HOTEL McCASLAND, EAST ST. LOUIS, ILLINOIS.

J. HARRY RANDALL, ARCHITECT, ST. LOUIS, MISSOURI.

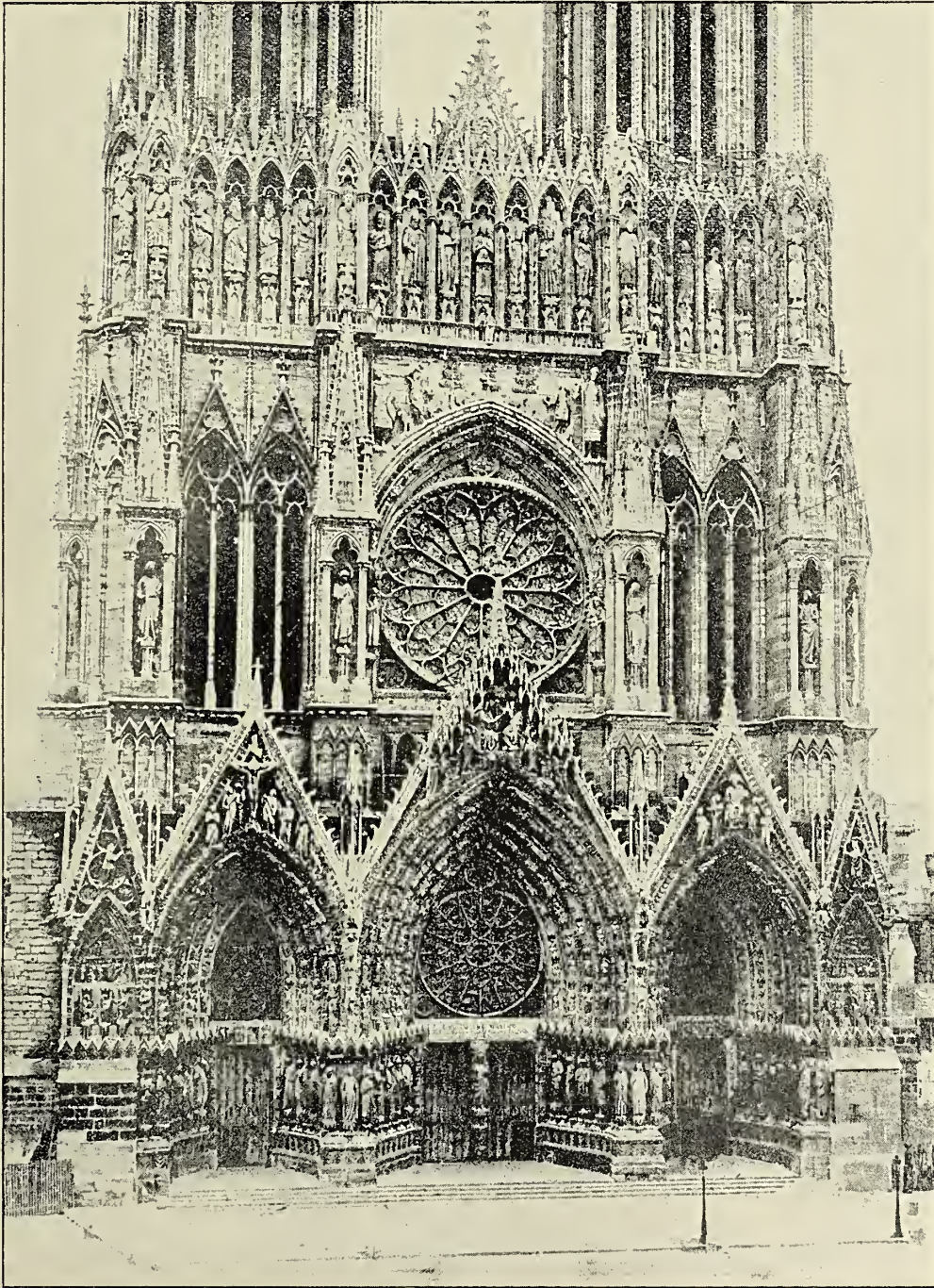


GOTHIC CAPITAL, REFECTORY ST. MARTINS DES CHAMPS.



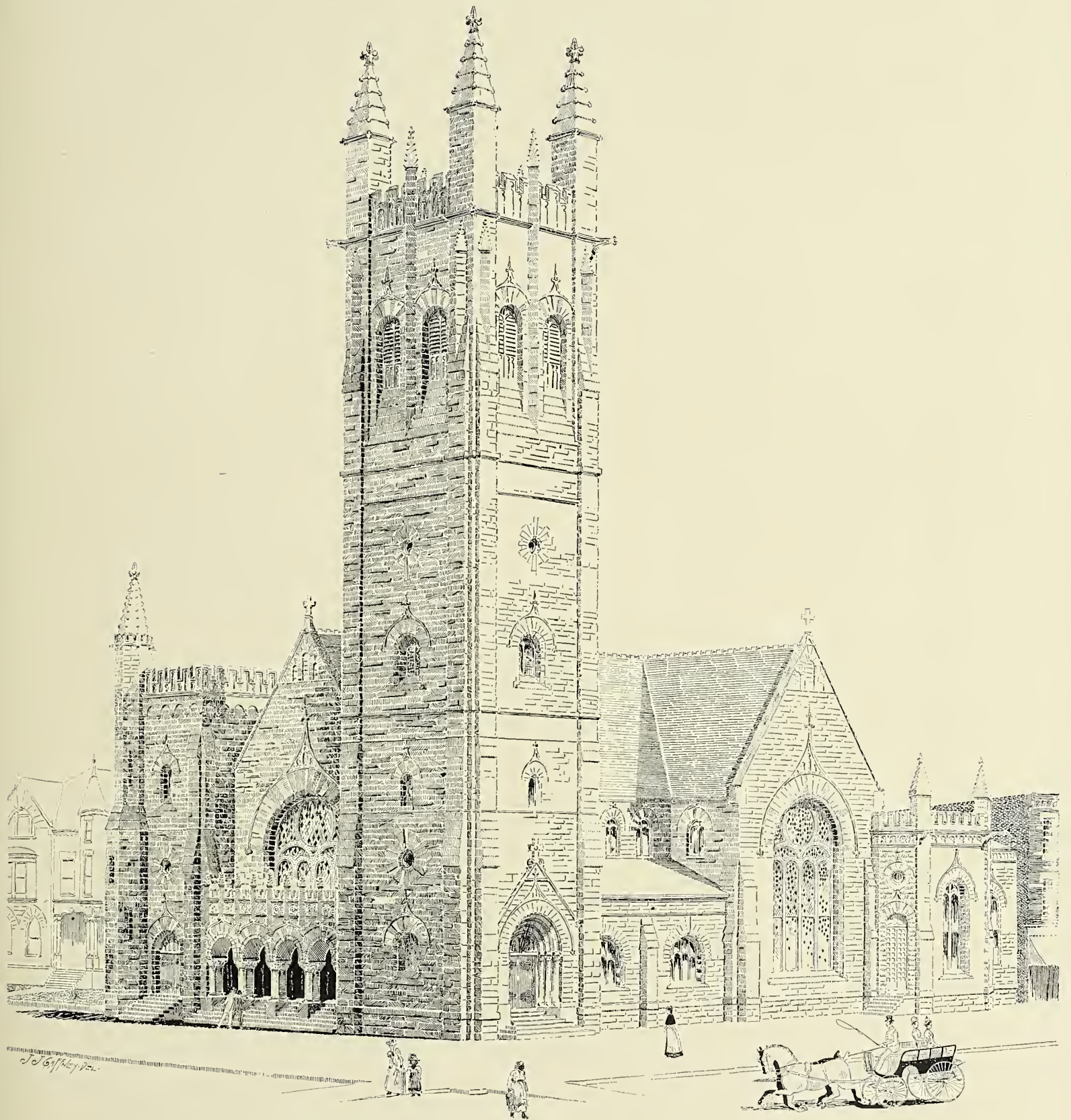
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IN ILLUSTRATION OF ARTICLE "ARCHITECTURE AND THE ALLIED ARTS" IN THIS NUMBER.



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IN ILLUSTRATION OF ARTICLE "ARCHITECTURE AND THE ALLIED ARTS" IN THIS NUMBER.



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MCDONALD BROS., ARCHITECTS, LOUISVILLE, KENTUCKY.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVIII.

JANUARY, 1892.

No. 6

THE INLAND ARCHITECT AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to

ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

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TERMS: Regular number, \$3 a year; Photogravure edition, \$8 a year. Single copies, Regular number, 25c.; Photogravure edition (including 7 photogravures), 75c. Intermediate number, 10c. Advance payment required.

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Death of Chicago's First Architect.

Architect John M. Van Osdel, the pioneer architect in Chicago, at the age of eighty, died in Chicago, December 21, 1891. Mr. Van Osdel was born in Baltimore, July 31, 1811. His father was a carpenter, and he followed his father's trade, which then, as for almost fifty years afterward in the United States, meant architect as well as builder. At the age of twenty-two he compiled and published a work on house carpentry, and in 1836 he was employed by a New York gentleman, Mr. William B. Ogden, to design and build a residence for himself in the frontier town of Chicago, and he removed to that city to erect it, shipping much of the millwork for it from New York. Upon the completion of the Ogden residence, Mr. Van Osdel practiced as architect and builder for several years, and two of the first large steamers built in Chicago were constructed by him, the only case in the history of Chicago where an architect has turned his attention to marine architecture. He built immense pumps upon a very ingenious plan for lifting water from the Illinois and Michigan canal and constructed a horizontal windmill to supply the necessary power, and was engaged upon other works of a similar nature. The health of his wife necessitated his return to New York in 1840, where for a year he edited the building department of the *American Mechanic*, now the *Scientific American*, but returned to Chicago the following year, and abandoning building, became the first architect *per se* to practice in that city or in the West. He designed grain elevators, among them the first erected in Chicago; he spent two years in the iron foundry business, and it was in 1845 that his office on Clark street showed the sign "John M. Van Osdel, architect," and he laid the foundation of an architectural practice that has always kept pace with the city building. We will not enumerate his works; for coming as he did to a new city stupendous and rapid in its growth, it can readily be seen how an active mind, a resolute will and a fund of general constructive knowledge, such as he possessed in a remarkable degree, should be taken hold of by those who made Chicago what it is. No problem was too difficult for him to solve, for during his whole life his action always said "I will either find a way or make it." Therefore, to say that he was closely identified with the city's growth, but faintly expresses the intimate relations existing between his master-mind and each point of its material progress. In a series of papers written by Mr. Van Osdel for THE INLAND ARCHITECT ten years ago, the last serious work from his pen, he gives many quaint pictures of those early days in the city's upbuilding. He was always progressive, but with that conservative progressiveness that made him in his latter days look with disapproval upon a twenty-story office building, but which did not prevent him at a more active period of his life, placing the Tremont house, a brick structure one hundred feet square, upon screws, and raising it a story—a feat which at the time was considered much more marvelous than the erection of high buildings is considered today. These are his works as he leaves them to history. His personality, resting in the memories of those who knew him, cannot be recorded. He was a gentleman, and of what is termed the "old school." Courty always, dignified always, and he knew no more of moral than he did of

physical fear. The truth to him was always the truth beyond any suggestion of compromise. He accepted nothing without investigation, and once convinced, he was a loyal supporter of his convictions. Ever anxious that others should have the advantage of his knowledge, he gave the affairs of others the same careful thought that his own received, but was never arbitrary regarding the use of the advice given. A year ago we mourned the loss of one of another age and epoch — a meteor that suddenly went out when its path was brightest in our sky. We do not thus mourn the departure of this light that shone before our fathers were born, and in the steady luster of which men have built for two generations. He belonged to an epoch that passed with him, and with his death the scene changes in the history of the nation's architecture. He lived to see the old order change, giving place to new, and the work of a lifetime well completed. The city of his youth and manhood had become strange to him while he lived in the midst of it. The methods of building which he had always pursued and found good were changing with the new conditions and demands of a new era. He goes to rest as few kings have gone, leaving a lifework perfectly accomplished, and a memory that has in it nothing of regret, but all of praise, a name that, no matter how brilliant those the future may inscribe upon the superstructure of this country's architectural fame, will be found graven upon the foundation stones by future generations of architects.

Establishment of Government Testing Stations. On January 27, 1892, the National Board of Trade will meet in Washington, D. C. One of the leading topics announced for discussion will be the establishment by the United States Government of stations for testing the strength of building materials. At last year's meeting of the National Board of Trade, held in New Orleans, Louisiana, the following rather sweeping resolution was offered and laid over for the approaching convention in Washington :

"Resolved, That it is the sense of the National Board of Trade that the United States Government should place in each city of 100,000 or more inhabitants in the United States, a testing machine of the capacity of 1,000 tons, upon which any citizen, having prepared his materials, may have them tested free of charge, and that said machine should be installed in a building arranged for that purpose and under charge either of military or civil officers of the government engineering service, etc., etc."

The various mechanics' exchanges of the country, and probably the National Association of Builders, will have representatives at this meeting, and its recommendations will therefore carry considerable weight. We do not object to the resolution as a whole, but that the work outlined seems too elaborate. Why would not a station at New York serve for Boston, Brooklyn and Philadelphia, or at Chicago for Milwaukee or Cincinnati for Louisville. The cost of establishment and maintenance in the thirty odd cities of over 100,000 inhabitants would be enormous, and upon computation might defeat the measure. There now exist testing stations at some points. At Washington University, St. Louis, there is a private testing apparatus of fifty tons, capable of testing full size wood, iron or steel beams twenty-four feet long. At the United States Arsenal at Watertown, Massachusetts, is a testing apparatus of 400 tons, and the Union Bridge Company at Athens, Pennsylvania, has a testing machine of 400 tons, while the Phoenix Bridge Company, at Phoenixville, Pennsylvania, has the largest testing machine in the world, its capacity being 1,200 tons. In addition to these a large number of iron and steel concerns have testing machines of from 25 to 100

tons, and there is similar apparatus connected with many of the engineering schools. No country is so well equipped as ours ; and accessible as is every manufacturing center the need for thirty or more testing stations under government control is not apparent, though if the work could be done under the control of army engineers and thoroughly divorced from political influence, much good could be accomplished by the establishment of testing stations of the first class in a few of the larger centers of manufacture.

Relation of State Chapters to the A. I. A. The relations of the American Institute of Architects to its affiliated Chapters, state and local, has been and still is a most perplexing subject. The Constitution and By-Laws of the Institute do not recognize any difference between state and local Chapters ; they are all equal in their relations to the Institute at large. It is a problem which presents itself chiefly in the states containing several cities of sufficient size to have local Chapters of the Institute, and others in which there are architects in good standing but not enough in number in any one city to form a local chapter. In these states there is a positive necessity for a federal organization. How to bring this about has puzzled the Fellows and directors of the Institute ever since its reorganization, and the solution seems as far off as ever. As the same, however, cannot be definitely determined by the officers of the Institute alone, but will have to take the form of amendment of Constitution and By-Laws to be proposed within the current year and acted upon at the next convention by the entire Institute, it gives subject for thought to every Fellow of the Institute, and we shall open our columns to suggestions from everyone who has given the matter enough attention and thought to have anything to offer upon this head for the consideration of his fellow practitioners. The matter received extended consideration at the recent meeting of the board of directors of the American Institute of Architects, a detailed report of which is published in this issue.

How to Write a Hardware Specification. How to write a specification for "shelf hardware" which shall answer every practical requirement, in view of the infinite variety of hardware now on the market, the necessary limits to the length of an architect's specification, and the traces of total depravity still lingering in the nature of some bidders on buildings, is a disputed point. Some architects specify the hardware "by allowances" for each door, window, etc. This practice, which is known as the "Boston Method," was recently criticised by a hardware journal as implying simplicity or credulity on the part of the owner, and a firm of architects replied with a protest that the comment was unwarranted and reflected unjustly "on our common sense and brains," i.e., as architects. On matters of construction and of esthetics as applied to a building, architects may properly enough claim to speak *ex cathedra*. But in other directions they would often do well to hearken to the views of practical business men. It is as feasible for the architect to make a close estimate of the aggregate cost of the shelf hardware for a building and then specify the lump sum which the contractor is to allow for such hardware, the hardware to be selected afterward in detail by the owner. If the owner's selection exceeds the cost specified he pays the excess ; if it falls below he is credited by the builder with the difference. That is all there is to it.

Architecture and the Allied Arts.

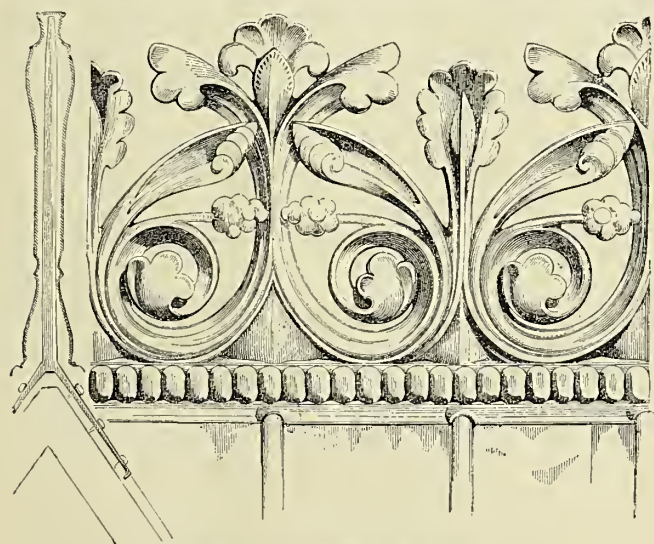
BY BARR FERREE.

PART IV.—Continued.

NEXT to altars and shrines the tombs form the most noteworthy part of the furnishing of a church. The most architectural of these monuments are in England, where a series of sepulchral monuments of great beauty is distributed in all parts of the country. They show that if the English were sparing of the use of sculpture on the exterior of their buildings, where the inclemency of the climate would not unlikely have speedily have disintegrated it, they still know how to combine it with architectural details. The earliest of these monuments are also the simplest, and consist of a raised slab or sarcophagus on which was placed an effigy of the deceased. Then a canopy was introduced, at first of wood but afterward of stone and having an architectural character. The Tomb of Edward II in Gloucester Cathedral, Edward III in Westminster Abbey, and of Bishop Redman in Ely Cathedral, are all superb examples of the canopied tomb, and show that the English artists were thoroughly capable of taking advantage of all the possibilities of Gothic architecture. The tomb is more highly developed in England than on the continent, though splendid specimens are not wanting in France, Italy and Germany. In these countries, however, it is more often in the form of sculpture than of architecture, and is frequently only a slab let into the wall or floor.

It is quite impossible in this narrative to present a summary of the varied forms employed in other examples of church furniture. The altar, the shrine and the tomb exhibit the fullest development of art, but the other pieces of sculpture and carving, the pulpits, the fonts, the galleries, the screens, the canopies, the stalls, the doors must be passed over with simple mention. They all partook of Gothic character and most of them had architectural form. So thoroughly, in fact, did architecture predominate in the art of the middle ages that many of the smaller pieces, such as the vessels of the altar, almost lost their distinctive form and became so many examples of architecture on a small scale. They were all essential to a consistent Gothic edifice, and exhibit to a remarkable degree the influence of architecture upon cognate arts.

Of the furniture of the cathedral, if, indeed, such a term is an appropriate designation for a feature that is frequently an integral part of the structure of the edifice, the most important is the choir screen. Even the altar itself is frequently not as imposing or as elaborately decorated as the screen which incloses the space in which it stands. Some of the most superb illustrations of mediæval sculpture are to be found on the choir screens of French cathedrals.



A CREST RAIL, NOTRE DAME, PARIS.

Sometimes they are open in front or separated from the body of the church by iron railings, but the sides and rear are decorated with series of scenes from the life of the patron saint of the structure, or from Scripture. Thus the choir screen of the cathedral of Amiens has representations of events in the lives of S. Firmin and S. John the Baptist. More important and beautiful is the wonderful screen of the cathedral of Chartres. (Choir Screen, Chartres Cathedral. See insert illustration pages.) Here a long series of Scriptural scenes is contained within delicate frames of pinnacles and arches, the whole forming a combination that has frequently been compared to point lace in stone for its delicacy of treatment and minuteness of execution. The cathedral of Albi has also a noteworthy screen, but

the ornamentation is more strictly architectural than in the examples just noted. In England also the screen is treated more architecturally than in France. There are no sculptures save those belonging to monuments, which are built into the walls of the screen and in fact form part of it. Sometimes the tombs and chapels which form part of the choir screens in England are of great beauty. Several fine illustrations are to be found in the cathedral of Worcester. The rood screen, a series of arches supporting a large crucifix or rood, has survived longer in England than in France. The choirs were also more inclosed toward the nave in English churches than in French, but the effect of thus cutting off the eastern portion of the church was not always happy. The organ was often placed on the choir screen in England, thus bringing all the parts employed in the service directly in the center of the church.

Mention should be made of the *Sacraments Hauslein*, the receptacle for the sacred elements, which are a piece of church furniture peculiar to Germany, though occasionally found in Belgium, and, very rarely, in France. They were frequently of considerable size, and are among the most elaborately ornamented interior decorations. Some are of great beauty, notably those in the church of S. Lawrence at Nuremberg and in the cathedral of Ulm.

Before dismissing the subject of the ornamental use of stone in mediæval art, some notice should be taken of monuments and memorial structures that are independent of any connection with buildings. Any detailed notice of these objects is out of place in the present discussion, for, while many of them possess architectural form, they are not buildings nor have they any of the functions of a building. Among the best known of these are the English "Crosses," built by Edward I, of which only three remain though originally fifteen in number. The surviving specimens, near Northampton, at Geddington and at Waltham, are much dilapidated, but sufficient survives to show how admirably their designers understood the capability of Gothic forms. Very different from these are the Celtic crosses of Ireland, which are simple crosses ornamented with sculpture without architectural form. In Germany the *Schöne Brunnen*, the beautiful fountain, of Nuremberg, closely resembles the English cross, and, indeed, dates from the same period. Another class of monuments somewhat similar to these in general form is represented by the *Lanterne des Morts* or *Tedenleuchter* of France and Germany. These were placed in cemeteries or near tombs, and were frequently of considerable height. A glazed chamber near the summit afforded a place for a light.

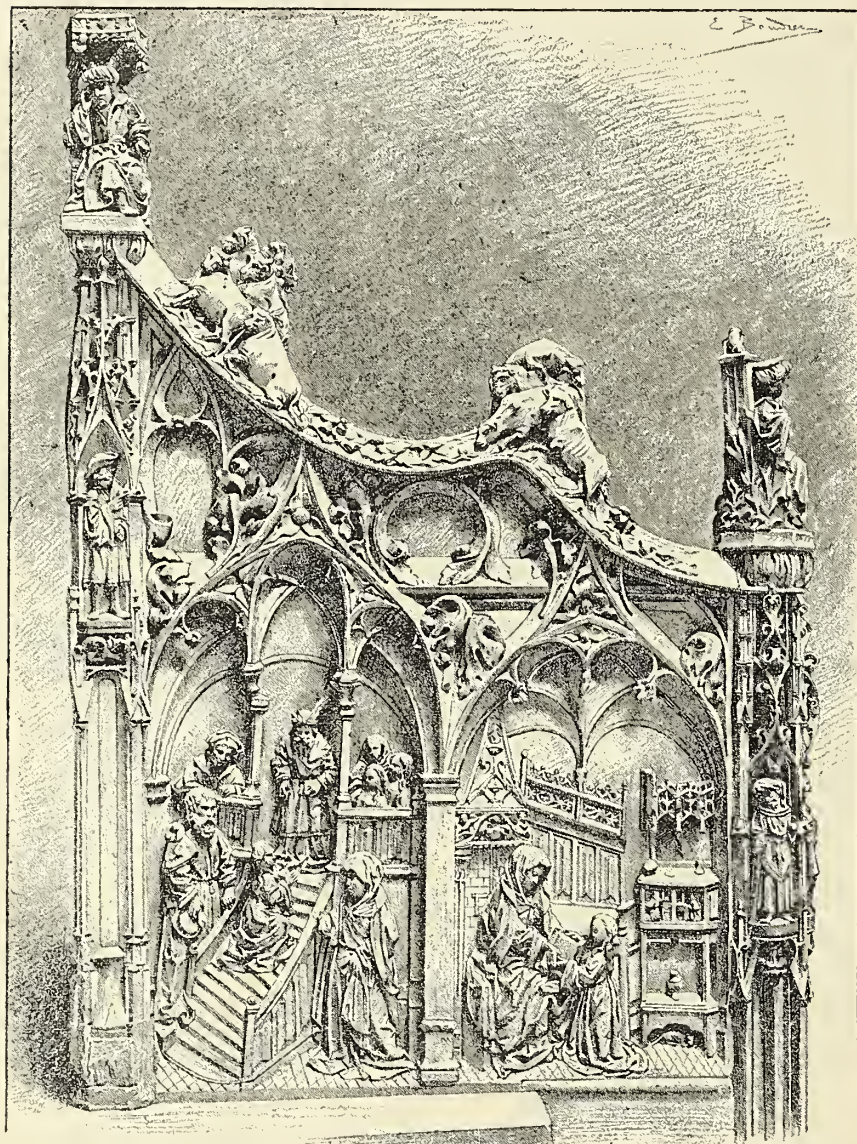
The baser metals, iron, copper, bronze and lead were employed architecturally and much fine work done in them. Railings, grilles, doors, hinges, standards and other articles which may be properly termed furniture were made of them. (Iron work, door of S. Anne, Notre Dame, Paris. See insert illustration pages.) The chief fact to remember in all this work is the care and attention given to the smallest detail. The railings which shut off the different parts of the church were as carefully designed and as much in harmony with the general lines of the structure as the most prominent architectural member. As much pains was taken with the casting of a single column or base as in carving the capitals of the entrance portals. Nothing was too insignificant to be overlooked, and in this way the builders obtained completed results that were far in advance of anything that would have been reached had small things been left to themselves or passed over as insignificant. Bronze was used for statues and doors, though the finest work of this kind, the gates to the baptistry of Florence, belong to the earliest period of the Renaissance. Iron and lead were largely used on the exterior of churches as grilles for the windows and copings and caps for the roof. Even when placed at a great height, where their beauty could scarcely be appreciated by the passer-by, the same care was taken as with work on the lower part of the edifice. There never was unnecessary elaboration, and details were not thrown away that were of no value, but everything was proportioned to the place it was to fill. The copings and weather vanes of many Gothic buildings are as worthy of as much study and attention as much of the finer work on the lower part of the structure.

Wood carving was also employed, though in an architecture of stone such as the Gothic emphatically was, it could not hold a prominent place. Wood altars and pulpits were of frequent occurrence, especially in Germany, as has already been noted. The stalls of the cathedral choirs and the episcopal thrones were also splendid specimens of this work, and are finely illustrated in those of the cathedral of Amiens. In England there are many wooden roofs, all elaborately carved, and many of great beauty. They become an important element in the architecture, and are carefully designed for that purpose.

The wooden roof was never vaulted, but openly followed the lines of construction on a system of its own. In domestic buildings wood was more frequently employed than in the churches. The eaves are often carved, and an elaborate gable is frequently prefixed to the building. Houses entirely of wood were also built, having a form different from

were unequally developed; the architecture was indeed highly refined, but the painting and sculpture were lacking in many of those technical qualities which are essential to perfect work, though endowed with much spiritual feeling and truth. These were developed in the new life termed the Renaissance, when the spirit of progress, that had been struggling so long in the fetters of barbarism and darkness, freed itself from all restraint and broke forth in one of the most remarkable intellectual movements the world has experienced.

Though Gothic art employed a great variety of minor arts, and though much of its individual character was derived from them, it was essentially constructive. No element of the Gothic system is more marked than the ornamental form given to constructive features. Gothic decoration did not consist alone in the application of ornament to architecture, but in making architecture ornamental by the intelligent treatment of constructive parts. Thus the buttress, the flying buttress, the finial and pinnacle were all parts of the construction of a Gothic church, but they received a decorative form which, while not interfering in the least with their constructive value, made them an essential and important portion of the ornamental aspect of the building. Nothing more fully illustrates the artistic spirit with which the builders of the middle ages were imbued than this turning of constructive elements into decorative parts without in the least affecting their static condition. In the interior the same thing is to be noted. The long rows of columns which are necessary to support the vault, the engaged columns which carry the ribs of the vaults and the supporting arches, all have an artistic value which is part of their constructive usefulness. One of the most important developments of constructive decoration is the ribs of the vaults. This is especially the case in English vaulting, where it was carried much further than in France, and which is, in truth, one of the most interesting features of English Gothic architecture. Like all other ornamental features of Gothic art this reached its most complex type in the later period. An interesting comparison can be made between the vaulting of the Chapter House of Salisbury Cathedral and the Chapter House of Wells. In the former the ribs are confined to the actual structural requirements, and have only a secondary decorative value. In the latter they are more numerous, and though they still follow the general lines of construction are partly ornamental. In later work the fan tracery for vaults was invented in which an elaborate system is used that is quite



CHOIR STALL, AMIENS.

the houses of stone. In this respect Gothic architecture shows a marked difference from the principles of Roman building, which sought to obtain uniform effect, be the material plaster, stone, brick, marble or wood. It freely and boldly exhibited its true structure and its true substance, a condition that its freedom of form and its ready adaptability permitted it to assume without losing its essential characteristics.

The Gothic system did not depend on one form of art alone, but made every phase of art a part of itself. Some writers have maintained that the allied arts were not, properly speaking, an essential part of Gothic architecture, but within the last twenty-five years the records of Gothic art have been so thoroughly searched, analyzed and classified that such a position is no longer tenable. The sculptured capitals are as much a part of a Gothic cathedral as the stones of the walls. To painted glass is due the large window space that early became the most characteristic feature of the style, while the sculpture and painting to be found in all parts of the structure are parts of the general plan, and all help to give the building its true character. Remove the sculptured capitals and moldings, knock out the painted glass, whitewash the walls, destroy the furniture, the statues, the carvings of all kinds, and there is nothing left but walls and meaningless openings. The lines may be light and graceful, but they are without expression, and the beauty of a complete and perfect art is wanting. Replace the removed parts, and there springs into life a new structure, throbbing with the intellect of a progressive age. The union of all the arts is intimate and close, though of a different intensity and kind from that noted in other styles. The Gothic artists seized upon all phases of art and made them part of one whole. They

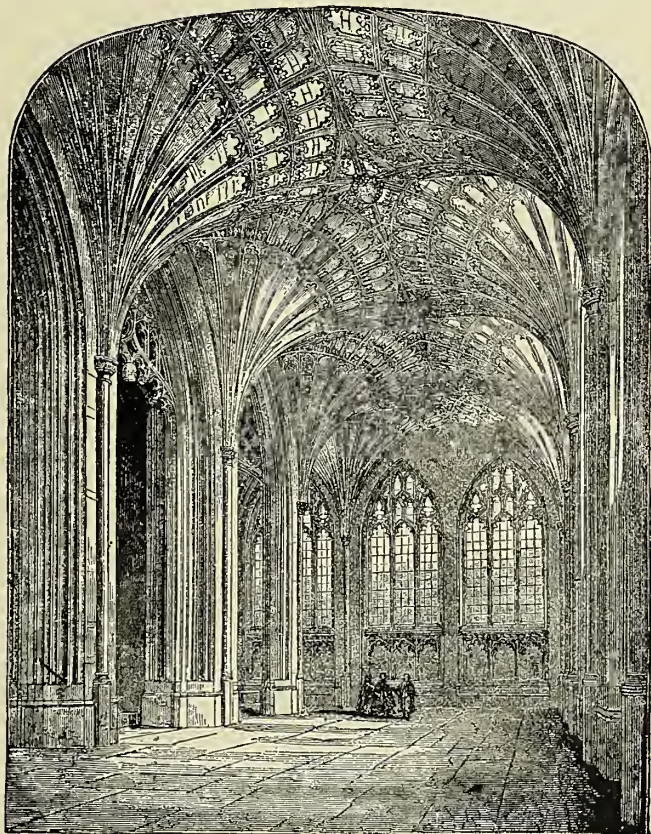
wanting in the structural purity seen in earlier work. The vaulting of King's College Chapel, Cambridge, Henry VII Chapel at Westminster, and many others, are examples of this method, which, notwithstanding its violation of constructional necessities, is one of the richest forms of English Gothic, and is far beyond anything done by the French in vaulting. One of the most elaborately decorated vaults built in the Gothic style is that of Roslyn Chapel, in Scotland. Here the under sides of the ribs are enriched with bosses and carved ornament, which, while very splendid in its result is quite wanting in the simple beauty of earlier vaulting.

The decorative evolution of constructive forms is seen in almost every portion of the Gothic church. The columns and piers in the later examples have a more ornamental effect, while not less constructively important, than in the earlier buildings. A most interesting and valuable study would be a comparative examination of longitudinal sections of a number of Gothic churches of various dates and origin. The treatment of the piers, columns, arches, the proportions between the vertical parts, the nave arches, the triforium and clear-story, the arrangement of the features of the triforium and clear-story, and above all the great increase in the use of ornamental tracery in the windows, would be found to have undergone a progressive evolution from simple and heavy forms to those of extreme lightness and delicacy. The parts become more and more ornamental, and more and more essential elements of the decoration.

Nor was this the case only in the chief parts of the church. Minor portions had the same treatment. Moldings not only had character from the carved forms with which they were decorated, but the sections of the piers, the profiles of the moldings and capitals

and strings were equally marked and individual, and so thoroughly was this carried out throughout the entire mediæval period that the forms and profiles of the moldings, the sections of the ribs and piers are accepted and recognized as safe means of identifying the style and date of a building, and are not infrequently the chief means of determining its identity. Scarcely a part, therefore, of the Gothic structure did not receive in some manner an ornamental treatment, and form, in a measure, a part of the decoration of the structure to which it was itself constructively necessary. It is scarcely an exaggeration to say that in this consists one of the greatest, if not the greatest merit of Gothic architecture.

The decadence of Gothic art, as in all other forms, was marked by an over-use of ornament and the consequent increase of the ornamental parts at the expense of the construction. It is indicative of the inherent progressiveness of decorative elements that this phenomenon should be noted in all the stages of art history, whether there be any organic connection between them or not. The Egyptian,



RETRO-CHOIR, PETERBOROUGH CATHEDRAL.

the Greek, the Roman, the Byzantine, the Moorish, the Gothic, and as we shall shortly see, the Renaissance, all culminated in a form of architecture which was more decorative than structural, and in which the ornamental parts are given an importance quite incommensurable with their constructional functions. Ornament is no longer used as an adjunct to architecture, the allied arts are no longer assistants to architecture, but architecture becomes subordinate to them. Its constructional value is lost, parts are multiplied without reason or necessity, and the greater the amount of decoration the more satisfied seemed the builders. It cannot be denied that there is a fascination in late Gothic façades such as the front of the cathedral of Rouen, the courtyard of the Palais du Justice in the same city, the wonderful buildings of the monastery of Belim in Portugal and many other buildings of the same period. The delicate lace-like work of these structures is not judicious architecture, and their unquestioned richness and beauty fails to satisfy the eye and the reason. It is such works as these in which ornament ran riot that prepared the way for the more stately façades of the early Renaissance.

(To be continued.)

A PARTNERSHIP is about to be formed in St. Louis between Alexander Stewart, of James Stewart & Company, architects, and Messrs. Mulgart and McClure. Mr. Mulgart is recently from the office of Henry Ives Cobb, of Chicago, and has been engaged for the past two years upon the Newberry library. Mr. McClure was formerly with Fuller & Wheeler, of Albany, New York, and has been superintending the erection of two important structures in St. Louis for that firm.

Seventh Exhibition of the New York Architectural League.

It would perhaps be an exaggeration to term the seventh annual exhibition of the Architectural League the most important of the series, but it contains several features that give it an interest and value quite distinct from any of its predecessors and render it more than usually attractive to the public. An exhibition including the principal buildings for the Columbian Exhibition and the new Episcopal cathedral in New York would be remarkable in itself were these drawings supplemented by nothing else. But when in addition to these chief features a collection of drawings is included that is confessedly representative of the best architectural work designed during the past year, the entire collection exhibited becomes one of paramount importance.

Though the general plans and elevations of the Columbian Exhibition buildings have become by this time generally familiar to a large class of the public, there is an especial advantage in grouping them in one collection both for purposes of comparison and the scarcely less useful purpose of familiarizing the public with the real merits of these buildings, which are entitled to stand as the best product of American architectural skill in their particular line. This is especially the case in the East, and in New York perhaps more than elsewhere, for notwithstanding the extensive and justified advertising the Columbian Exhibition has received, it is still looked upon as mythical, an impression the present League exhibition will materially help to diminish. Unfortunately the collection of drawings is not complete, even of the buildings now in process of erection, there being no picture of the Woman's building, for example, but doubtless the vacancies arose from circumstances over which the League had no control and for which it is not responsible. But surely the buildings represented might have been illustrated more fully and with greater detail than in the small drawings, good and effective as they are, in which several of them are shown. General views only are given of Mr. W. L. B. Jenny's Horticultural hall, of Mr. S. S. Beman's Mines and Fisheries building, of Messrs. Peabody and Stearns' Machinery hall (three views), of Messrs. Adler & Sullivan's Transportation building and of Mr. Henry Ives Cobb's Fisheries building. Even Mr. George B. Post's immense building for Manufactures and Liberal Arts would be included in this category were it not for a large drawing of the main entrance, giving full details, and noteworthy as being, with the exception of a large and impressive outline drawing of Messrs. McKim Mead & White's Agricultural building, the only drawing in the collection large enough to permit an intelligent study of the actual merits of the Exhibition buildings.

Much more satisfactory, in the manner of illustration, is Mr. Richard M. Hunt's Administration building, of which there are no less than eight drawings, including a masterly general sketch by F. Hopkinson Smith, unfortunately drawn at so early a stage of the Exhibition enterprise as to include in the background a view of an Eiffel tower which the directors have since happily discarded. Mr. Hunt's drawings include plans and several working drawings, forming a valuable object lesson in the work of the architect, with the practical details of which the public are much too unfamiliar. The collection is rendered still more complete by photographs of the present state of the building, showing the progress and method of work, and by several casts of decorative features. Mr. C. B. Atwood's thoughtful Galleries of Fine Arts is likewise fairly well illustrated, the drawings showing the original design, its final form, a section and two working drawings.

It is evident enough from the irregularity with which these buildings are illustrated that it is impossible to form a just estimate of their merits. One receives the general idea of the buildings rather than their individuality, from the small scale drawings shown. And the architects lose quite as much as the public, for the similarity of style in which all are designed — a well controlled Renaissance thoroughly adapted, on the whole, to the problem in hand — makes them appear in the small drawings much more similar and uniform than they really are. In buildings such as these, designed for a few months for similar though not uniform purposes, it is impossible to expect the individuality and variety which may be possible in smaller structures.

One oblong exhibition building must be much like another; the architect can only vary his outline and plan to a limited extent, and he must depend on the decorative features for his chief effects. As a whole the architects of the Columbian Exposition are to be congratulated on their work. They have met the conditions frankly and produced structures thoroughly well adapted to their purposes and

yet of sufficient architectural interest to make them satisfactory examples of architecture.

The Columbian Exhibition buildings are but temporary structures and therefore should not be judged by the standards requisite for permanent buildings. Yet both the material and the style gives them a more solid appearance than such structures heretofore have had, and almost place them in the category of permanent, in which their merits are not less visible nor less real than when they are looked upon as temporary only. Very different in purpose and intention is the new Protestant cathedral for New York, of which a finely rendered water-color drawing occupies the place of honor. It is hardly possible to exaggerate the importance of this building, because it is intended to stand for all time as the best product of American ideas in architecture at this day. If Chicago is to be congratulated on her Exhibition buildings New York is certainly not to be felicitated on her cathedral. The final accepted design shows several changes in the original conception of Messrs. Heins and La Farge, but they can scarcely be called improvements. The central tower and spire have been made larger and more massive without any corresponding grace or beauty of outline. The alternative idea of two towers with spires on the front has been dropped, and two square-topped towers substituted. A high arcade has been carried around the top of the nave. More unfortunate is the suppression of the lateral doorways on the front, which now contains but a single entrance, a central one which, notwithstanding the recess in which it is placed, is totally without the dignity and impressiveness of the French portals. The New York cathedral is not modeled on French Gothic, but in adopting the Gothic as the style for the new cathedral it is a pity not to have selected its most developed and richest form. This is the more to be regretted as the projectors of the cathedral have sought to place their structure in direct comparison with the great European cathedrals, a comparison, it is scarcely necessary to add, that results very much to its disadvantage.

The cathedral and the Exhibition buildings stand alone as exceptional structures, but the collection of drawings is full of interest. A great variety is shown, the country house being, as usual, the most numerous represented and the most successful from an architectural standpoint. Indeed, so numerous are the country houses this year that, judging by the exhibition, one might almost conclude that it was no longer customary to build city dwellings, so few are the examples. While it is quite true that the country dwelling offers greater freedom and more advantageous opportunities to the architect, the city dwelling more closely represents modern life, and its absence from this representative collection of current architecture deprives it of what should be one of its most characteristic features. The Colonial style is more than ever a favorite for country dwellings, and some very effective designs are shown. Messrs. Berg & Clark show a house at New Rochelle; Messrs. Stratton & Ellingwood, a house at Tuxedo; Mr. Julius A. Schweinfurth, a home and outbuilding at Roxville; Mr. E. T. Hapgood, a residence at Bangor; Warren R. Briggs, a country house; Messrs. Little & Browne, another house; while a residence at Morristown, by Mr. C. A. Gifford, is an example of too great a leaning to this style in which all the unpleasant features are exaggerated. Messrs. Rossiter & Wright show alterations to an old country church, at Liberty, New York, in the Colonial style; Messrs. Rotch & Tilden exhibit a Colonial design for the proposed Newton Club house, while another club house in the same style, the Knollwood Country Club, at Elmsford, is shown by Messrs. Berg & Clark.

The Colonial is the favorite, though not the universal, style for country dwellings. No uniformity need be looked for, nor is it desirable, but the tendency toward the Colonial is a decided advance in country architecture, not only for the real beauty of the style, but for the quiet and subdued buildings that result from its use. Mr. Bruce Price shows an effective design for a cottage at Tuxedo, a rather severe idea well worked out and with liberal wall space judiciously left undecorated. Mr. Albert Randolph Ross shows a small, but good, country house at Cold Springs. Mr. Wilson Eyre, Jr., has an interesting group of house and stable at South Bethlehem, and other picturesque dwellings are shown by Messrs. Cook, Hapgood & Co. and Messrs. Little & O'Connor. Very different from these small houses is the immense country mansion exhibited by Mr. R. H. Robertson. This is an enormous castellated structure, in which the architect has apparently undertaken to condense all his mediæval ideas in one structure, with a heavy and labored result seldom seen in the work of this architect. Somewhat similarly ambitious is a design exhibited by Mr. Julius A. Schweinfurth, for a residence. Another

large country house is that by Mr. J. H. Taft, for C. B. Alexander, at Tuxedo Park, designed on Elizabethan models.

Of churches there are quite a number, though, as with the houses, it is the country church which is more successful than the city. One of the most successful of the latter is the design of Messrs. McKim, Mead & White for a church at Stockbridge. A low tower on the front is connected with the church by a passageway, and the simple forms and pleasing outlines of the group form one of the most successful designs in the collection. Very good also, though not quite so effective in detail as in mass, is the sketch for Central Congregational Church at Lynn by Messrs. Little, Brown & Moore, closely modeled on the typical English parish church, with low square tower. Another picturesque church is the chapel for the Howard University by Mr. J. E. Baker. Messrs. Rossiter & Wright show their design for the Hillside Presbyterian Church at Orange, which has the merit of being evidently a country church, not a city structure put up before the city has been built. Much less successful than any of these, because much less expressive of its intentions, is the library and church by Mr. E. T. Hapgood, a semi-colonial structure which might serve almost any purpose at all without seeming to be any one thing more than another.

In city churches Mr. Charles C. Haight exhibits a thoughtful design of a rather small building with a well marked central tower in English Gothic. Mr. Henry F. Kilburn shows two churches, the West End Presbyterian Church of New York, and a competitive design for church, chapel and school for Collegiate Church, of which the latter is a much more effective design than the former. Each has a tower on the corner, but the ground has been so closely utilized as to render effective grouping of the various edifices out of the question. Much the same might be said of Stephenson & Greene's design for the Congregational Church of the Covenant in Brooklyn, a very wide front, broken into several parts by chapel and tower, the latter being octagonal and rather unfortunately placed on a low square base. More effective in its grouping is Mr. R. H. Robertson's design for St. Luke's Church in New York, of which the rear, much the better part, is shown. This building is placed on a site that falls rapidly behind, affording excellent opportunities for an effective grouping of minor parts that the architect has thoroughly availed himself of. The design more nearly approximates the genuine Romanesque than many structures which now pass under that name. The walls are plain and ample, and broken only by pilasters instead of by buttresses.

City buildings are better represented by business buildings and hotels than by dwellings and churches. Messrs. Adler & Sullivan exhibit their interesting design for the Dooley Block and Hotel Ontario at Salt Lake City, and Mr. H. J. Hardenbergh has an effective drawing of his immense Waldorf Hotel now in process of erection at Fifth avenue and Thirty-third street. In country hotels, of which several are shown, there is a Southern Hotel by Mr. George E. Wood; Mr. James Brown Lord exhibits another ambitious design, while almost overpowering in its immensity is the hotel "Laurel in the Pines" at Lakewood, designed by Messrs. Carrere & Hastings. None of these buildings have anything but their size to recommend them, the making of good façades of the extent required in these structures being apparently a problem for which no successful solution has yet been found. All of them, however, have merits that make them superior to the fantastic design for a hotel sent by Mr. George F. Newton, evidently borrowed from the Chateau of Blois, an impossible structure not entitled to a place in a sober collection of architectural realities.

Although quite a number of business buildings are shown, it cannot be said that any remarkable contributions have been made to the working out of the most complicated problem now before American architects. Architects in the East have not yet been able to break away from old traditions that western architects have passed beyond, and most of the new buildings exhibited are characterized by attempts to make "façades" of the immense modern fronts. Chicago architects have found a way out of this difficulty by not undertaking to mass or arrange their façades, but the most important office building shown by a Chicago firm, Messrs. Adler & Sullivan's office building and hotel at Salt Lake City, is too low to be treated in the typical Chicago manner. Mr. George E. Harney shows an office building quite in the current New York manner. First of all comes a base of stone, on which is erected a brick superstructure in two sections, the first, consisting of three stories, being included under arches, the second, likewise of three stories, inclosed in a sort of square frame, while above is an attic with a gabled roof. The architect has done his best to break up his front, and succeeded only too well. Very

different is the building designed by Messrs. Carrere & Hastings for the *Mail and Express*, the long, narrow and much drawn-out Broadway front of which contains more diverse elements than have probably ever before been put into such narrow compass. It will, perhaps, be doubtless better to omit any criticism of this edifice until it is completed, the more so as that end cannot now be much delayed. The Pierce building, by the same architects, contains some of the features employed in the Fulton street front of the *Mail and Express* building, and being a broader and lower structure, is not so freely open to criticism.

Mr. George B. Post has a finely executed drawing of his building for the Prudential Insurance Company, at Newark, in which he has used the same elements he so successfully brought into use in his *Times* building and the building for the Union Trust Company, without, however, improving as much upon the Trust Company's structure as it was an improvement upon the *Times'*. Messrs. Shipley, Rutan & Coolidge send a drawing of their Ames building at Boston. Messrs. N. Le Brun & Sons exhibit their design for the Metropolitan Insurance Company's building in Madison Square, and Messrs. Andrews, Jacques & Rantoul the Equitable building, at Denver. This last structure is in three divisions above the basement, an arrangement which, while doubtless admirable for lighting purposes, somewhat detracts from the dignity of the front. The same firm also exhibits a design for the Equitable building at Des Moines. The building of the Edison Electric Illuminating Company, by Messrs. Buchman & Deisler, is another large structure in which the front is so divided as to appear almost like two distinct buildings placed one on top of the other.

Of miscellaneous buildings there are a number worthy of special mention. Mr. W. A. Potter sends several drawings of his thoughtful Commencement Hall for Princeton College. Mr. Bruce Price has his new Dormitory for Yale University, a sober design and thoroughly suited for its purpose. The same architect also exhibits a design for the Hotchkiss Preparatory School, at New Haven, in the Colonial style. Mr. James Brown Lord sends his long series of buildings for the Bloomingdale Asylum, and Messrs. Lamb & Rich a very satisfactory design for the Staten Island Academy.

Several buildings almost completed, or just completed, are shown. Mr. Robert W. Gibson exhibits his design for the new Greenwich Savings Bank, remarkable as being one of the few new buildings in New York built for business purposes, and only a single story high. As a matter of fact this structure consists of a single story and an attic, but as it will be one of the very few buildings devoted entirely to the needs of a single bank in the city it becomes more conspicuous than its proportions make it. Messrs. H. J. Hardenbergh, Walter C. Hunting and John C. Jacobson show the final design for the American Fine Arts Society building, one of the most important enterprises now under way. Mr. W. B. Tuthill sends a drawing of the entrance to the Carnegie Music Hall, and a design for a portico for the public tombs at Woodlawn cemetery, a classic design with Corinthian order. Messrs. McKim, Mead & White have a view of the Madison Square tower and roof garden, and Mr. Stanford White sends a view of his design for the Washington Memorial Arch.

There are several interesting examples of interior work. Mr. Bruce Price shows an interior for a library; Messrs. Francis H. Bacon and A. H. Davenport, a Tap Room for the Philadelphia Country Club; Messrs. Brunner & Tryon, a sketch of interior work in Montreal in the Renaissance style, and the Shrine of the Temple Beth-el; Messrs. Parfit Brothers send an elaborate color scheme for the Temple Israel. An interesting though very irregular group of drawings are those sent in for the fifth annual competition of the League, representing a town hall for a town of about 20,000 inhabitants. Thirty-two drawings were submitted from all parts of the country, in varying styles and of various degrees of merit. Several thesis and competition drawings from Columbia College testify to the good and thorough work done in that institution.

Apart from the drawings of the Columbian Exhibition and the New York cathedral the most remarkable feature of this exhibition is the introduction of working plans and detail. In an exhibition of this kind intended for the instruction and profit of the general public it is only fitting that some of the practical methods of architects should be shown. The public should know that architecture is not simply the production of pleasing fronts, but that behind very lie important questions and difficult problems which determine very often the form of the exterior. The preparation of the beautiful and effective drawings which decorate the walls of the League's exhibition implies much more than the use of pencil and brush, and while it may be true that working drawings convey little idea to any but architects, that is no reason at all why they should not be included in

an exhibition of current architecture, and the more so since it is in these that the modern architect finds his most difficult work and achieves his greatest triumphs. Several such plans and drawings are included in this collection, and it is to be hoped their number will increase from year to year.

It is a pity also that the League exhibitions cannot be given a more national character. The most important architectural exhibition in the country, it should omit no effort to make the collections as full and as complete and as thoroughly comprehensive as possible. Many out-of-town architects are represented in the present exhibition, but the volume of outside work, and especially of western work, is lamentably small. Whatever the reason, it is a subject that calls for energetic remedying in future years.

As usual the architectural exhibition is supplemented by a decorative exhibit of a very general character, but very interesting on the whole and an admirable supplement to the architecture with which it is associated. This part of the exhibition is unusually full, crowding the small room in which it is put to serious disadvantage of the objects. Mr. Georges A. Glaenzer sends an interesting collection of First Empire stuffs, fabrics and ornaments. Mr. Stanford White loans some carved and gilded columns from Spanish churches. Mr. John La Farge sends some interesting studies at Samoa and the Fiji Islands. Mr. Alexander W. Drake contributes a large and valuable collection of brass and copper vessels collected from various sources and illustrating various times and countries. There is a large cartoon for the Murphy window in St. Paul's, Newark, designed by Walter Crane, and many other decorative features and designs which must be passed over for want of space.

The Rights of The Lowest Bidder.*

WHAT CONTRACTORS WISH TO KNOW.

THE inquiries comprised in this article were suggested by a brief paragraph in the Architectural Department of the *Engineering Magazine* for October. The paragraph referred to a decision of importance to architects and builders, and stated compactly that a Boston contractor, having been the lowest bidder for a contract covering the erection of a building for the Boston Chamber of Commerce, and having had his bid rejected, had sued for, and recovered damages amounting to \$14,500 in the court of first resort; and that the case having gone up on appeal to the court of highest resort, the Supreme Court of Massachusetts, the judgment of the lower court was therein confirmed. * * *

The system of awarding contracts to competing bidders, who base their estimates and proposals upon specifications prepared by supervising architects or engineers, is so extensively practiced, and concerns so many lines of business, that a statement of some abuses that have gradually crept into it, together with their legal remedies, and an epitome of the legal status of both parties to a contract based upon the acceptance of either a written or verbal estimate and proposal seem desirable. * * *

It appears, from the decision cited, that the lowest invited bidder has legal rights growing out of his invitation to bid. How is the lowest invited bidder to be legally identified? What, in the eye of the law, constitutes a "lowest invited bidder"?

Messrs. A, B, C and D are asked for estimates and proposals, each being furnished (as they are duly informed, and as they reasonably suppose) with a copy of the same specifications and drawings. In accordance with their invitation, each, after a more or less exhaustive consideration of the specification, sends in a proposal. In so far as cost of material affects their estimates, we will suppose that all of the bidders—each being of good commercial standing—are practically on one level, any one of them being able to purchase the materials required at a price as low as the others can. As to cost of labor, they may not be able to arrive at the same conclusion; and, on this account, their bids may legitimately vary, but not very widely. Their estimates may also vary legitimately from the fact that one or more of them will be content with a somewhat less profit than the others; the profit desired being influenced by various commercial reasons, as the amount of work on hand, the desire, in a dull season, to avoid the discharge of workmen, etc. In these days of active competition, the margin of profits has been so narrowed for all contract work that it cannot with safety be much reduced; for this reason no very wide deviation in the bids of responsible houses can be expected.

The bids are opened and the contract is awarded to Mr. D. The rejected bidders, asking for the amount bid by Mr. D, are politely informed that this can be of no particular consequence to them, and the information is refused. Now, how are they legally able to ascertain whether Mr. D was really the lowest bidder; or whether, through a preference growing out of something else than the sum named by him as his price for the work, the contract has been awarded to him, regardless of the rights of the "lowest invited bidder"?

Another case: Let us suppose the same bidders have competed as before, and that the contract has been awarded to Mr. D. In some way the rejected bidders obtain all the prices named, and find,

* By Leicester Allen, A.B., M.E., and Charles E. Hellier, A.B., LL.B., in the *Engineering Magazine* for January, 1892.

while the bids of Messrs. A, B and C vary only in so far as may be reasonably accounted for from ordinary commercial reasons, that of D is so far below any of the others, that if he perform the work according to the specifications and drawings upon which the other bidders base their estimates, he must do so at a notable and inevitable loss. Let us suppose the rejected bidders to be suspicious that there is "a cat in the meal," and to quietly watch the progress of the work as executed by Mr. D, discovering, as the result of their scrutiny, that the work is either allowed to depart so far from the specifications as to greatly cheapen its execution, or that another and totally different specification is followed by the favored contractor. In this case who is the lowest bidder, and what are his legal rights? * * *

Let us suppose another case—that in which two contractors each put in the same estimate, their bids each being lower than any of the others. To whom, in this case, must the contract be awarded?

There is another phase of letting contracts to competitive bidders. Certain specifications are presented; several invited bids are made; one of them is substantially lower than the others. The contractor who puts in this bid is, it seems, legally entitled to the award of the contract, but he is now confronted with a formidable document—carefully prepared, ironclad articles of agreement containing requirements and limitations not mentioned in either the specifications or the notice to bidders accompanying their invitations. Is the lowest bidder, in this case, obliged to sign such articles of agreement? Should not the articles of agreement simply coincide in all particulars with the specification, or be filled out and appended to the specification as the form in which all bids must be presented? Does the lowest bidder, in this case, make void his legal claim to the award of the contract by a refusal to sign articles of agreement which, as his legal counsel advises him, contain provisions not made plain in either the specification, the notice to bidders, or the letter inviting him to bid? The form of contract adopted by the joint committee of the American Institute of Architects, the Western Association of Architects, and the National Association of Builders, contains the following clauses:

"4. The Contractor shall, within twenty-four hours after receiving written notice from the Architect to that effect, proceed to remove from the grounds or building all materials condemned by _____, whether worked or unworked, or take down all portions of the work which the Architect shall condemn as unsound or improper, or as in any way failing to conform to the drawings and specifications, and to the conditions of this contract. The Contractor shall cover, protect and exercise due diligence to secure the work from injury, and all damage happening to the same by neglect shall be made good by _____."

"5. The Contractor shall permit the Architect, and all persons appointed by the Architect, to visit and inspect the said work or any part thereof, at all times and places during the progress of the same, and shall provide sufficient, safe and proper facilities for such inspection."

Suppose now that the accepted bidder has signed this contract, and that the person appointed to inspect the materials and the work during its progress turns out to be one who seeks to obstruct the work by undue, useless, untimely and annoying inspection, or by arbitrary and unjust condemnation of materials, or of work which has been done strictly and honestly in accordance with the drawings and specifications. What is the contractor's remedy?

Under the conditions imposed by the clauses quoted, has an inspector unrestricted and absolute power to reject or approve materials or work, so that he may wait until all the work has been done before he rejects materials; or is there some equitable principle of law which screens an honest contractor in performing exactly what he expected to do—what he had just reason to expect when he made his proposal?

In cases wherein several parties are requested to estimate upon work furnishing each his own specification, and wherein each estimates upon a different class of materials and different construction, who is to be considered legally as the lowest bidder, and what are his rights as such?

In a case wherein several contractors have been invited to estimate upon identical specifications and drawings, and wherein some uninvited "dark horse" comes forward with specifications and drawings independently prepared, underbids all of the invited bidders, and has his offer accepted—is he legally the lowest bidder? If not, what are the rights of the "lowest invited bidder"?

Has an invited bidder, uninformed otherwise before making his bid, the presumed legal right to assume that the lowest bidder will have the contract awarded to him, unless the right to reject any and all bids is specifically reserved in the notice to bidders?

These are points of interest, not only to contractors, but to all supervising architects and engineers, and to building committees. The writer's experience with architects and engineers ranking high in their professions leads to the unavoidable inference that the large majority of them are fair, just men, incapable of taking advantage of contractors who honestly carry out the provisions of their specifications; unfortunately there are exceptions, but exceptions to integrity are much more numerous among contractors and engineers, and architects are not to be blamed because they take every means to fortify themselves against "scamping." But it seems that the character, reputation and commercial standing of competing bidders ought to be ascertained before invitations to bid are sent out; and that fairness and commercial, if not legal equity demands that, once the invitations are made, each bidder should stand on exactly the same level, except in a case wherein intervening commercial embarrassment or bankruptcy renders any one of the bidders incompetent.

There ought also to be some way of circumventing the "ways that are dark and the tricks that are vain" of the race of straw bidders. * * *

Mutual protection is, I take it, the basis of all equitable contracts. On the one hand, the supervising architect or engineer feels the necessity of fortifying himself against the possibility that a contractor may slight his job. It is for this that specifications are prepared, and that an honest, reasonable and just inspection, at proper times, is indispensable. I submit, on the other hand, that the proper time for

inspection of materials is when they are delivered. It is manifestly unjust that a contractor who has, in good faith, supplied a quantity of costly materials, supposing them to fully accord with the specifications, but which, unknown to him, may, perhaps vary therefrom in some minute particular, should be allowed to erect these materials, at additional cost, only to lose on both materials and work, through the final condemnation of the materials, after the work is completed.

THE ANSWER OF THE LAW.

The rights of the lowest bidder are to be determined in each particular case by the contract, either expressed or implied, entered into between the party who invites bids and the bidder who accepts the invitation. The lowest bidder can have no rights other than those agreed upon with the party to be bound. A public advertisement, by newspaper or otherwise, or a private invitation to a selected number, has never been held by any court of last resort in this country or in England to imply a promise that the lowest bid should be the bid selected; but such advertisements or invitations for bids are considered as requests for offers, and no contract is created and consequently no rights exist until an offer is accepted.

In some localities, where a certain person or firm has been found to excel all competitors in a particular line of work, injustice is sometimes done by a competition being asked for with the sole purpose of acquiring a basis of figures upon which to make a contract with the excelling person or firm. If the bidders had no knowledge that the competition was not *bona fide* and could show that their bids were obtained solely for the purpose of making the lowest possible contract with a previously chosen party, they might recover damages for the time spent in preparing the bids; but as in most cases of this kind the existence of such a state of affairs is an open secret, would-be bidders have the choice of remaining out of a competition which exists in name only, or of putting in a bid in the hope that it may prove so low that the more fortunate rival will not care to come down to it; a hope which generally proves futile, as usually he is better equipped to do the work than the other bidders, and is able and willing to make as low terms as any one rather than give up the job.

In the recent Massachusetts case of McNeil vs. The Boston Chamber of Commerce the facts were as follows: The Boston Chamber of Commerce having voted to build, a building committee was appointed who soon after their appointment selected as their architect one of the leading firms of architects in Boston. After a consultation between the building committee and their architects, the committee invited five of the leading builders in that part of the country to submit bids for the new Chamber of Commerce building, upon plans and specifications made by their architects. Four of these five builders, after inspecting the plans and specifications and the notice to bidders attached to the specifications, declined to submit bids. The building committee then called a meeting of the builders at the rooms of the committee at which all five builders were present, as were also the committee and one of the partners of the firm of architects; the four builders said they would not bid unless the committee would agree that the lowest bidder should have the contract, if the building were built substantially in accordance with the plans and specifications then made by the architects; at the trial before the jury the four builders testified that the committee agreed to the proposition. Some other matters were discussed at the meeting, and the builders went away satisfied. In a few days they again called at the office of the architects and got copies of the specifications and made bids; attached to the specifications, being the first page thereof, was a "notice to bidders." This was the same notice which was attached to the specifications seen by the builders before their refusal to submit bids, with some of the modifications agreed upon at the meeting noted upon it. Among other things the notice to bidders stated "the building to be let to the lowest bidder"; and farther down the page "the building committee of the Boston Chamber of Commerce reserves the right to reject any and all bids." By agreement the bids were opened in the presence of the five bidders; McNeil's was the lowest. The committee announced that they reserved their decision. Several days afterward they requested McNeil to make certain reductions in his bid, some of which he did make, but others which he was asked to make without any corresponding change in the specifications he did not feel as if he could make, and so informed the committee. The next day the five bidders received notice from the building committee that all the bids were rejected, and they were asked to submit bids in a new competition on plans and specifications substantially like those already bid upon. McNeil immediately wrote to the building committee, claiming the contract by virtue of the oral agreement entered into at the conference of the builders with the building committee, to wit: that the lowest bidder should build the building if it were built substantially in accordance with the plans and specifications then furnished by the architects; the three other builders who had at first refused to bid, now refused to submit new bids, and insisted that McNeil alone had the right to the contract to build the building. The building committee ignored McNeil's claim and proceeded to make a contract with the party to whom the other builders were suspicious the architects intended the contract should eventually be awarded after the form of a competition had been gone through with. (In justice to the architects it should be said that they testified that they had no such intention.) The specifications, made a part of the contract, were substantially the same as those figured upon by McNeil, the principal changes being a reduction in the number of piles under the foundation, the architects having discovered that more than were necessary had been required in the specifications as first prepared, and a change in the material of the façade of the building.

At the trial of the case in September, 1890, in the Supreme Court, before Mr. Justice Holmes and a jury of more than average

intelligence, all of the builders, except the one to whom the contract was given, testified that at the conference between the committee and the builders, the committee agreed that the contract for the building, if built, should be given to the lowest bidder. The representative of the builder to whom the contract was given who was present at the conference was called by the defendant and sworn, but was not put on the witness stand. The building committee denied that they had agreed to give the building to the lowest bidder, and insisted that they had never given up the right to reject all bids reserved to them in the notice to bidders attached to the original specifications, which clause appeared also in the modified notice to bidders attached to the specifications figured on by McNeil. The defendant further denied the authority of the building committee to make a contract for the building without the approval of the board of directors, and said that the board of directors had not given such authority and had not approved any contract, if any were made. It was denied also that the contract as finally awarded was for a building substantially the same as that figured on by McNeil. By consent of parties, five questions of fact were submitted to the jury; they were as follows:

1. Did the committee on building purport to make a contract on behalf of the defendants by which they agreed to accept the lowest bid in case the building was built substantially in accordance with the plans and specifications submitted, without reserving the right to reject bids in that case?
2. If such contract was made, was it approved by the directors?
3. If such contract was made, was it within the ostensible authority of the committee?
4. Was the building, as finally contracted for, a building substantially in accordance with the said plans and specifications?
5. If the plaintiff is entitled to recover, what are his damages?

The jury answered "yes" to the first four questions and placed the damages at \$14,500. McNeil's original bid was \$400,000, which was reduced to \$370,280 to correspond with certain changes in the specifications. The court ruled that as a matter of law the plaintiff could not recover and reported all the evidence in the case to the full bench, who decided that the jury were justified in their findings, and that the fact that McNeil figured on specifications to which was attached a notice to bidders containing a clause reserving to the committee the right to reject all bids, did not vary the terms of the oral agreement made at the conference, that the lowest bidder should have the contract; accordingly they ordered judgment for the plaintiff for the amount of the verdict of the jury.

But the case comes very close to the line, as will be seen by the following case decided by the same court some years ago. A town passed a vote at town meeting directing the selectmen to build a sewer of certain dimensions, the job to be advertised in the newspapers and let to the lowest bidder. The board of selectmen accordingly advertised for proposals for building a sewer; the advertisement directed persons desiring to bid to call at a place designated for specifications of the work to be done. A, in answer to the advertisement, called and received the specifications and put in a bid on them. The specifications contained a clause reserving to the selectmen the right to reject all bids. A's bid was the lowest of several bidders, but all the bids were rejected by the selectmen as being too high. A brought suit against the town and obtained a judgment, but upon appeal the Supreme Court of Massachusetts set the verdict aside, and held that the plaintiff had no cause of action. The decision was made upon the ground that the dimensions of the sewer called for by the specifications did not correspond with the dimensions of the sewer which it was voted at town meeting to build; but the court went on to say that even if this had not been so, the fact that A had made his bid upon specifications containing a clause reserving to the selectmen the right to reject all bids was conclusive against A's right to recover, as the specifications were essential to and constituted a part of the contract, and A having figured on them he must be held to have assented to the terms contained therein.

Having been requested to discuss, from a legal standpoint, certain questions raised by Mr. Leicester Allen in the first part of this article, they will be taken up, so far as feasible, in the order raised by Mr. Allen and reviewed briefly in the light of a recent and quite exhaustive search of the authorities on the subject of the rights of bidders and contractors. The question is asked, "What, in the eye of the law, constitutes a *lowest invited bidder*?" As a bid can be high or low only as measured by some fixed standard, it necessarily follows that all bids in an invited competition must be upon the same specifications and conditions, and the lowest legal bid in an invited competition is the one which names the lowest price for all the requirements of the specifications.

The next query is, If A, B, C and D upon an invitation put in bids on the same specifications and the contract is awarded to D, how are the others to legally ascertain whether D was the lowest bidder? As has been pointed out earlier in this article, A, B and C have no legal rights by virtue of their having put in bids, unless the person asking for the bids has agreed that the lowest bidder shall have the contract; if that has been done, an agreement that the bids should be opened and read in the presence of all the bidders would, in all probability, obviate the arising of any question of this nature; but in case such a question should arise, the remedy of A, B or C would be an action at law against the person who invited the bids, alleging the agreement that the contract should be given to the lowest bidder, and claiming that the plaintiff's bid was the lowest and asking for the damages suffered by reason of the contract not being given him; or an application might be made to a court of equity, praying for an injunction restraining the party who invited the bids from executing the contract with D, and asking that the court order the contract to be executed with the lowest bidder, as agreed. If there is an agreement that the lowest bidder shall have the contract, and the contract is awarded to D, whose bid did not conform to the specifications, that one of the other three, A, B or C, whose bid was the lowest

and in conformity with the specifications, would be entitled to the contract, and would have a good cause of action at law to recover damages for the non-execution of the contract with him. In case two bids in such a competition prove to be for the same amount, and lower than all of the others, the contract could not be awarded, as the agreement was that the lowest bidder should have the contract, which, being impossible in this case, becomes void, for impossibility of enforcement. A lowest bidder who is, by agreement to that effect, entitled to the contract, cannot be compelled to sign any articles other than those agreed upon, nor will he waive or render void his legal rights by a refusal so to do; one party to the contract cannot add to its terms without the consent of the other.

The contractor's remedy for unreasonable inspection and a consequent withholding of the whole or a part of the contract price is an action of contract to recover the price agreed upon. The issue of fair inspection is then directly raised, and if the work or material can be shown to reasonably comply with the requirements of the specifications, the contractor will be entitled to receive the amount withheld. Inspection must be reasonable and made at a proper time or else the contractor should receive the contract price. In matters purely of taste, such as for example the fit of a suit of clothes, or the style of a carriage, if the agreement is that the work shall be done "to the satisfaction of" the purchaser, it is a complete defense to an action to recover the price if the defendant says, "I am not satisfied," and he may be as whimsical and captious as he chooses; but where work is done or materials furnished according to specifications, and inspection is stipulated for, the inspection must be reasonable, and the contract price may be recovered if it can be shown that the work or materials reasonably fulfill the requirements of the specifications; if there were no specifications it is sufficient to show that the work or material was reasonably fit and proper for the purposes intended. For example, A agreed to furnish and B agreed to buy a million of brick for sewer work, the brick to pass C's inspection, the work being done for C, by B under contract; an inspector employed by C condemned the brick as unfit for the work. A brought suit against B, showed by expert evidence that the brick were suitable for the work, and also that at about the time that the inspector condemned the brick there was a fall in the price of brick, so that B was able to purchase of other parties for less than he had agreed to pay A. It was held in this case that A could recover damages of B for failure to take the brick, although they had been condemned by the inspector.

Where the specifications bid upon are different in each case, there can be no competition, and consequently no lowest bidder, within meaning of the term as used in this article. The lowest bidder, as was stated at the beginning of this article, has no rights simply by virtue of his bid being the lowest; his rights, if any exist, must rest upon a previously made agreement. There is no doubt that in many cases competitions are unfair and contractors spend fruitlessly much valuable time in preparing bids for them; but there is no protection for them in the law, except for loss of time, where fraud can be proved, unless they first protect themselves by some such agreement as the builders in the McNeil case forced the building committee of the Boston Chamber of Commerce to make. Such an agreement protects both parties.

The Rights of the Lowest Bidder from the Point of View of the Architect.

BY DANKMAR ADLER, ARCHITECT.

THE architect is the representative and agent of a client who is about to erect a building under the professional care and guidance of the architect, and which it is the desire of the client to build in the best manner possible and with judicious economy of time and money.

When the architect receives proposals from contractors, he receives them, not for the sake of giving a certain number of contractors an opportunity to drill themselves in the reading and interpreting of plans and specifications and in the taking out of quantities and in estimating the probable cost of work, but because he wishes to obtain for his client such information as will enable him to determine whom to employ as contractor, and what should be the lowest reasonable compensation for the services to be rendered by such contractor.

It is the duty of the architect, in receiving proposals, to endeavor to confine the selection of bidders to those who are, to the best of his knowledge, well qualified to the kind of work required by his client in each particular case. If he has been successful in the selection of bidders and all are equally well qualified to do the piece of work in hand, then it is the duty of the architect to his client and to the contractors who have expended time and skill upon the making of the proposal, to award the work to the lowest bidder. This is also a duty which the architect owes to himself and to the general mass of his clients—a duty from the consistent and continuous faithful discharge of which every client of the architect reaps benefit—that it be known to contractors that the awards of contracts habitually made by the architect are fair and just, and that, where other things are equal, contracts are invariably awarded to the lowest bidder.

Architects are, however, frequently placed in an embarrassing position by the peculiar attitudes of "enterprising contractors." For many contractors are profuse in their offers to make estimates and submit proposals upon all work which comes up in the architect's office, regardless of whether the architect believes them to be qualified for doing that particular kind of work or not; and others, fortunately less in number, are persistent in demanding, as an inalienable right, that they be called upon to make estimates upon everything that is to be done in the architect's office. It requires, in many

instances, a display of quite a degree of moral courage on the part of the architect to refuse the many tenders of proposals and the many demands for the right to make them, which if accepted or acceded to, would create in the case of each building a mob of bidders of every shade of capacity and incapacity, of every gradation from extreme responsibility and respectability to utter irresponsibility.

I hold that in cases of this kind, that is, where contractors voluntarily tender their services as bidders, or insistently demand that they be accorded the alleged privilege of becoming bidders upon work in the architect's office, there is no obligation on the part of the architect or his client to award the contract to the lowest bidder. In such cases the contract should be let to the best bidder, by which I mean that it be awarded to the bidder who presents the best record as to capacity to do the work well, and to do it in the time required, and whose proposal appears upon careful canvass of the situation the most favorable to the client. If contractors wish to insist upon being awarded contracts when they are the lowest bidders, they must first learn to refrain from indiscriminately tendering their services as bidders to architects or their clients, and still more must they refrain from the practice of demanding the right to bid on a given piece of work.

An embarrassment which frequently confronts the architect is this: Assume that there has been an ideal competition, that is, one participated in only by those selected for their special qualifications in connection with the particular kind of work to be done, and that all have figured carefully and have handed in their proposals, so that in equity and justice the contract should be awarded to the lowest bidder. But there may be among the bidders one who, though not the lowest bidder, is given a preference by the client because upon previous occasions he has served the client or one of his acquaintances or friends in a particularly satisfactory manner, or to whom such preference is extended because of some peculiar business or social relationship. In such cases the architect can hardly fail to remember that the affairs of this world cannot be carried on according to an ironclad and unalterable rule; that the "personal equation" necessarily plays an important part in the transactions of life; that if a given contractor has been fortunate enough to make firm friends, advocates and allies by unusually satisfactory performance of previous contracts and engagements, or by his personal amiability, or by the possession and exercise of any one or more virtues and amenities of conduct, it seems wrong that any stern decree of justice should deprive him of the business advantages which his personal qualities have won for him. It has been my practice in all cases of this kind not to disregard any apparently well founded preferences of my clients. But I have never endeavored to cloak these preferences, and by false reports of the actual status of the bids to create false impressions, but have frankly told the lowest bidder why my client saw fit to exercise his privilege of preferential selection, and have called attention to the fact that perhaps he, the rejected bidder, also has friends from whom some day he expects the same preferential treatment. I have never found that where a statement of this kind has been frankly made to a contractor, any serious fault has been found.

By way of conclusion and summary, the position of the architect toward the lowest bidder may be stated thus: The architect wishes to extend his business, which he can only do by obtaining new clients. He can get new clients only by serving exceptionally well those he already has. He can do this best—assuming of course that his office work is properly done—by intrusting the execution of the work placed in his charge by his present clients to the most capable and honest contractors and to induce these to do the work at the lowest possible price. The only inducement which the architect can offer contractors of the highest standing is the certainty that they will receive fair dealing at his hands, and the first opportunity for fair or unfair dealing in the relations of client, architect and contractors is in the taking of proposals and awarding of contracts. If contractors generally know that a given architect will treat them fairly when they make proposals upon work in his office, they will do all in their power to serve him and his clients faithfully and well, and will begin this effort by making their proposals lower than would be the case had they no confidence in the architect's sense of fairness and justice.

Therefore, the tendency of the policy of every right-minded architect is toward fairness in handling competitive bidding, and it is safe to assume that where, in cases like those before enumerated, contracts are awarded by clients with the architect's consent to parties who are not the lowest bidders, that such action is taken without any intention of breaking in upon a general policy of fair dealing and rectitude.

A SPECIAL train quite recently carried an invited party of the especially interested to witness the initial experiment with the Columbian movable sidewalk at the World's Fair grounds. A section of sidewalk of considerable dimensions was then started and is now in operation. The sidewalk consists of two strips of moving platform so placed that one may step from the ground or stationary walk upon the more slowly moving platform, and from that upon the more rapidly moving. The question of safety in stepping to and from the moving sidewalk seemed to be favorably settled, for elderly men and women, younger men and women, and children even, used the platforms, stepping to and from them with greatest ease, while no sign of danger made itself apparent. The capability of the moving sidewalk to accommodate great numbers was clearly demonstrated, together with the entire practicability of the scheme, and without doubt the sidewalk will do a great deal in aiding the masses to an economically comfortable and expeditious view of the widely separated features of the exposition, if, as they propose, the Columbian Movable Sidewalk Company do encircle the grounds with a continuous track about three and one-half miles long.

Meeting of Board of Directors A. I. A.

At a meeting of the Board of Directors of the American Institute of Architects, held at the office of the Institute, No. 18 Broadway, New York, on January 9, 1892, there were present: President Kendall, Messrs. Hunt, McLaughlin, Eames, Carlin, Stone, Jenney, Illsley, Hardenburgh, Ferry, Mason and Adler.

It was decided after thorough discussion that the next convention be held at Chicago, at a time to be hereafter fixed in consultation between the Executive Committee of the Institute and the officers of the Chicago Chapter.

A number of communications relating to the organization and maintenance of state Chapters were received and a very full discussion of the subject had. It was decided that, inasmuch as the Board of Directors could not, without previous amendment of the Constitution and By-Laws, change the relations of the Institute to its Chapters, state or local, the Secretary was instructed to prepare a synopsis of the various communications received upon the subject by the directors and of the discussion had in this meeting, and transmit the same to all of the members of the Institute with a list of questions called up by the discussion, which questions when answered by the Fellows of the Institute, would enable the Board of Directors to formulate a policy and propose the necessary amendments to Constitution and By-Laws for submission to the Institute at its next convention.

The following were named as the Executive Committee for the ensuing year: President Kendall, Treasurer Treat, and Secretary Adler as ex-officio members, and Messrs. Hunt, Carlin, Stone and Ferry appointed by the president.

The following were appointed members of the Committee on Education: Prof. William R. Ware, Prof. N. C. Ricker, F. W. Chandler, C. Francis Osborne, Prof. Lang.

Committee on Uniform Contract was appointed, consisting of Alfred Stone, S. A. Treat and D. Adler.

Committee to formulate a Code for Competitions: Messrs. Hunt, Stone, Illsley, Burnham.

Permission was granted, upon application, for the formation of new Chapters in Brooklyn, New York; Denver, Colorado; Worcester, Massachusetts; Tacoma, Washington, Iowa and Minnesota.

Action upon the proposed Architectural Congress in 1893 was postponed, as the Committee appointed to investigate and report upon the matter asked for more time.

The Secretary was instructed to reissue to all Fellows of the Institute the circular relating to the proposed bill on Reforms in Architectural Practice in connection with government buildings, and transmit copies of the same and of Mr. Windrim's proposed bill.

The following resolution was passed:

"Resolved, That the Board of Directors of the American Institute of Architects hereby endorse the efforts made by the architectural societies in the various states of the union, to place the practice of the profession of architecture on a footing similar to that enjoyed by the professions of medicine, pharmacy and the law, and that the various Chapters of the Institute be requested to do all in their power to further the passage of the legislative enactments to that effect.

The secretary was instructed to prepare a synopsis of the minutes of this meeting, and transmit copies of the same to the various architectural journals.

New Publications.

DESIGN BY A. L. TUCKERMAN, New York. Wm. T. Comstock, 1891. Price 75 cents, postage free, to any part of the world.

The little essay with the above title is intended to put the young student of design on the right path as to methods and order of procedure in the actual practice of his art, to furnish him with a sort of chart or diagram of the various steps to be taken from the inception to the completion of the work and of the relative importance and just correlation of the several steps in the process. The author gives not so much rules as principles, and intends, not to supply the student with the technical learning necessary to make designs in any particular style or for any special purpose, but to give him such a comprehension of the meaning and processes of designing as will enable him to use systematically and effectively whatever knowledge or skill he may have, to set before him a code or creed for work so that he may start right and continue with economy of means to ends. The subject matter is, therefore, fundamental and is clearly and simply treated. The work taken as a whole constitutes, not a complete work, but a chapter suitable to begin or close a more thorough-going treatise.

THE WASHINGTON BRIDGE (known during construction as the "Harlem River Bridge" and "Manhattan Bridge") over the Harlem River, at New York City, a description of its construction; by William R. Hutton, chief engineer. Quarto, 100 pages; 63 plates; bound in cloth. Price, postage paid, \$8.00. Leo Von Rosenberg, New York—35 Broadway.

This elaborate volume will be of the greatest interest to engineers; and of incidental interest to all who deal with masonry and iron constructions. Mr. Hutton has given here the history of the undertaking from the inception of the project to its completion, comprising plans of the bridges first suggested for the site, of several of those submitted later in competition, of the bridge as contracted for and as finally completed. The work is shown by handsome albertype plates at twenty-six stages, and from such view points as to make the several processes plain. There are thirty-seven lithographs showing early plans, and details of executed plans, including construction of caissons, machinery, masonry, ironwork, false works, roadbed approaches, drills, derricks, etc. There is the full text of the specifications and extracts, and further explanation of special conditions met in the work and means adopted to solve new problems, together with tables of prices of materials and reports of extensive tests of the several kinds of materials. The bridge has a total length of 2,375 feet, and

the two central arches are of iron, with each a clear span of 510 feet. The bridge is thus a noteworthy structure. At the time of its completion there were few metal arches of equal span. The longest clear span of metal arch, without lower horizontal chord, is 542 feet, in the Garabil Viaduct over the Truyere, France. The estimates of proposed bridges for this site included several masonry structures, at an estimated cost of something less than twice the actual cost of the completed masonry and metal bridge.

A TEXT BOOK ON ROOFS AND BRIDGES. Part II, Graphic Statics, by Mansfield Merriman and Henry S. Jacoby. New York, John Wiley & Sons.

Part I of this work, published some time since, dealt with the computation of stresses in roof trusses and in all the common styles of simple bridge trusses; to the third and fourth parts are assigned "the design of a bridge, which includes the proportioning of details and the preparation of working drawings," and "the discussion of cantilever, suspension, continuous and arched bridges"; and this second part treats of the analysis of stresses by graphic methods. The authors, who are respectively professor and instructor of civil engineering in Lehigh University, do not profess to have set forth much that is new in an elementary work, but call attention to the arrangement and presentation of the matter, "to the abbreviated processes employed in some of the diagrams for wind stresses, to the determination of stresses due to initial tension, and to portions of the analysis of maximum moments and shears under locomotive wheel loads as possessing points of novelty and practical value." The time has gone by when it is needful to point out the value of the graphic method, whether for original solution of the problem or for a check upon a theoretical solution. It only remains to say that the authors have done their work well; the subject is treated amply from various standpoints, for determination of maximum and minimum stresses, for various kinds of loading; and the book will be found to be a satisfactory working treatise.

Our Illustrations.

Office building for the Chicago Title and Trust Company, Chicago; Henry Ives Cobb, architect.

Design for the Mercantile Club building, St. Louis, Missouri, as finally approved; Isaac S. Taylor, architect.

Illustrations of article, Architecture and Allied Arts, "Door of St. Anne, Notre Dame, Paris," and "Choir screen, Chartres Cathedral."

The summer residence of Col. B. W. Wrenn, Frontenac, N. Y., on the St. Lawrence River; Frank H. Taylor, artist and architect. Two views are given: an exterior and interior.

Accepted design for the Carnegie Library Building, Pittsburgh, Pa.; Longfellow, Alden and Harlow, architects. Reproduction from photograph by W. S. Bell of the architect's drawing, through the courtesy of A. Y. Lee.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residence at Rochester, N. Y.

Residence of C. H. Angel, Rochester, N. Y.

Residence at Philadelphia; Wilson Eyre, Jr., architect.

Residence of J. D. Allen, Chicago; Holabird & Roche, architects.

First Regiment Armory, Chicago; Burnham & Root, architects.

Description given in Vol. XIII, No. 7, page 90.

Residence of H. R. Wilson, Chicago; H. R. Wilson architect. Two full-page plates are given, as follows: view in parlor; view in dining-room.

The Pope building, Boston, Mass.; Peabody & Stearns, architects. First story is of light Indiana stone; the stories above are of light creamy brick and terra cotta detail of about the same tone of color.

Personal.

A UNION of two architects, John H. Coxhead, of St. Paul, and W. W. Carlin, of Buffalo, with offices at the latter city, is one of the probabilities, if not already a fixed fact.

ARCHITECT D. C. Ernest Laub, of Gordon & Laub, of San Antonio, the designer of the Texas state building of the Columbian Exposition, was in Chicago recently, and placed before the Chief of Construction one of the handsomest of all the state buildings.

THE Boston firm of Shepley, Rutan & Coolidge have decided to abandon all offices in other cities, and have established one in the Gaff building, Chicago, which will be in charge of Mr. Coolidge. The high standing of his firm and Mr. Coolidge's genial personality will make his presence most welcome in Chicago architectural circles.

THE Ohio chapter of the American Institute, at the request of the State Commissioners for the Columbian Exposition, appointed a committee to procure a design for a state building. James W. McLaughlin, of Cincinnati, was chosen, and that architect, together with J. W. Yost, of Columbus, and George W. Rapp and John Boll, of Cincinnati, were recently in Chicago.

MR. BARR FERREE, of New York, recently spent a few days in Chicago collecting notes for an article for an eastern journal upon Chicago architecture. The first installment has appeared, probably as an introduction, as the author says: "This is not architecture, it is Chicago." However well that gentleman can write upon architectural subjects, and his work in this line is always correct, and displays wide knowledge of architecture, his comments upon the city in general are as funny as anything written after a similar hasty visit, by a Dickens, a Max O'Rell or a Kipling. Like a distorted perspective, you recognize the place but wonder how so capable an artist could make so inaccurate a drawing.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT, }
CHICAGO, January 19, 1892. }

Because of the negligence and lack of system prevailing in so many cities and towns throughout the country, it is impossible to gather reliable statistics regarding building operations, and, therefore, approximations and general statements must be made in a summing up of the results of the past year. Throughout the entire year enterprise felt that the brakes were partially on, that caution was in mind, that apprehensions of overdoing were prevalent. This feeling was the very natural outcome of the great London failures of the previous autumn, and to the unsettled feeling which was imparted to business throughout the commercial world. Besides, the notion began to have some force that in this country we had reached a convenient place to breathe a little and recover ourselves. Besides, all prices showed a declining tendency and labor was restless. Investors and the banking interests looked askance at the situation, and thought there would be nothing lost by going easy for a while.

Out of all these conditions and opinions came the year's business, larger in volume by far than was generally anticipated at its opening. The immense crops came in time to strengthen confidence, and to turn the tide of gold this way. Out of this will probably come increased activity, and enterprise, heavier investments, and a general hardening of values. Labor may, and probably will take advantage of improving conditions to make demands that will intercept the smooth flow of business enterprise. In cities, conditions are generally favorable to continued activity in building, and in the smaller towns, so far as reliable information can be had, especially in the agricultural sections, there will be even more building than during the past year. The possibility of slightly higher prices for building material is recognized, but the heavier operators will make early provision for their requirements. In fact, this early buying and contracting for supplies seems to be assured in many channels. Lumbermen will not enter the spring trade with unwieldy stocks, and in trade circles strong prices are expected. In the iron and steel branches prices are very low, and much business of the early months of 1892 will be done on the basis of present prices. In general manufacturing, among the greater and lesser industries there is confidence and evidence of coming activity. Throughout the South prosperity is general, but not of a very stimulating character because of the abnormally low price of cotton. Throughout the West there are evidences of a general expansion of demand, which help all manufacturing and building interests. Our financial situation is strong, but needs more strength. The financial needs of the people are far from being met, and those who control our financial policy seem to regard the question more as a political than an economic or financial one. Never were our agricultural and manufacturing interests so evenly and healthfully balanced. Raw material of all kinds and manufactured products of almost every description have been crowded down to a low level. There are probabilities of greater railroad building in 1892 than last year, heavier mining operations, and a greater spread of manufacturing interests. The region west of the Mississippi will attract more capital and enterprise than ever, and already the evidences of this coming activity are felt in monetary, manufacturing and jobbing circles.

Synopsis of Building News.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Baltimore, Md.—The Women's College will erect two new buildings at a cost of \$150,000.

Architect Charles E. Cassell: For William A. Moale, a nine-story apartment house, size 51 by 126 feet, brick and stone; cost \$200,000.

Buffalo, N. Y.—Architect W. H. Archer has prepared plans for the new Java Center Academy and Union School, Java Center, New York. The building is classic in design with handsome cupola on roof, with large portico entrance and pediment. Front, frame, brick and stone, two and one-half stories with basement. It comprises schoolrooms, classrooms, lavatory and wardrobes and four entrances. A spacious staircase leads to an assembly hall, 32 feet by 49 feet, having paneled ceiling. The schoolrooms have blackboards and chalk-boards, are wainscoted, have floors of maple and is complete in every respect, is amply lighted and ventilated and heated by hot air.

Chicago, Ill.—Architects Lamson & Newman: For Goodhart Bros., on Winchester avenue, near Polk street, a three-story store and flat building, 45 by 82 feet in size; cost \$13,000. Pressed brick and stone front, with galvanized iron bay windows, gravel roof, hardwood finish and all improvements.

Architects Small & Bishop: For P. W. George, on Sixty-first street, near Stewart avenue, a three-story flat building; to have pressed brick and stone front, gravel roof and all improvements; cost \$20,000.

Architect W. L. Carroll: For W. T. Burgess, on Paulina street, near Adams, a three-story flat building, of pressed brick and stone, gravel roof, electric bells, speaking tubes, etc.; cost \$10,000.

Architect A. F. Hussander: For A. V. Young, at Fairview, several eight-room frame houses; cost \$1,500 each. Also working on plans for a four-story and basement flat building; cost \$22,000. Stone front, gravel roof, stained, plate and beveled glass, electric bells, speaking tubes, etc.

Whitney & Starrett Company have taken out a permit for a twelve-story office building; to cost \$700,000; to be erected on the northwest corner of Fifth avenue and Washington street, at present occupied by the *Times* building.

Architect Charles Thisslew: For M. Barge, at 244 W. Division street, a three-story store and flat building, to have a front of Anderson pressed brick and stone, galvanized iron bays, gravel roof and all improvements. For P. M. Peterson, on W. Division street near Robey, a three-story flat building, to be of pressed brick and stone, with gravel roof, sanitary plumbing, etc. For C. Lewander, at 633 Wells street, a three-story flat building, of pressed brick and stone front, gravel roof, stained glass, sanitary plumbing, stone sidewalks, etc. For M. Gran, on W. Ohio street near Wood, a three-story flat building, of Anderson pressed brick and stone front, sanitary plumbing, etc.

Architects Clayton & Frazier: Preparing plans for a block of three-story stores and flats, to have a frontage of 250 feet, and cost about \$50,000; pressed brick and stone front, with galvanized iron bays, electric bells, speaking tubes, electric light, steam heat and all sanitary improvements.

Architects Shepley, Rutan & Coolidge are taking bids on foundations, walls and roof for the Art Institute building, to be erected on the Lake front park. It will be all of stone, with two very handsome fronts—one fronting on the lake and the other on Michigan avenue.

Architects Wilson & Marble: For E. Q. Griffing, three three-story and basement residences, to be erected on West Monroe street, stone fronts, slate mansards and gravel roof, stained, plate and beveled glass, sanitary and modern improvements; cost \$30,000. Also preparing plans for a three-story and basement residence, to be erected on Michigan avenue near Thirty-second street; it will have a brownstone front, slate mansard roof, hot-water heating, marble and tile work, and will cost \$25,000. For M. Stevenson, on Washington boulevard, a three-story flat building, 25 by 70 feet in size, to be of pressed brick and stone front, gravel roof, electric light, all sanitary improvements; cost \$15,000. For Doctor

Brown, at 3135 South Park avenue, a two-story residence, of stone front, gravel roof, slate mansard, hardwood finish, stained, plate and beveled glass. For same owner at same location, a two-story and basement livery stable of common brick; size 40 by 45 feet.

Architect L. G. Hallberg: For Thomas Dougall, on Cedar street near the lake, a three-story semi-detached residence, of stone front, gravel roof, hardwood finish, plate and beveled glass; cost \$15,000. For himself, on the northeast corner of Twentieth and Brown streets, a three-story warehouse, 100 by 110 feet in size; to cost \$25,000.

Architect Robert Rae: For William Smith, on Wabash avenue, south of Thirty-first street, a four-story flat building, 25 by 70 feet in size; to cost \$15,000; cut-stone front, hardwood finish throughout, gravel roof, electric bells, speaking tubes, etc.

Architect C. E. Quiner: For Dr. Goodsmith, on Fullerton near Sheffield avenue, three three-story residences; to have stone fronts, slate mansards and gravel roofs; galvanized iron bays; stained, plate and beveled glass; electric bells; speaking tubes; furnaces.

Architect J. L. Merriam: For M. Mortimer, at 2706 Dearborn street, a three-story and basement flat building; to be of pressed brick and stone front, galvanized iron bay windows, gravel roof, sanitary improvements.

Architect Julius H. Huber: For F. E. Brookman, on Roslyn Place, between Clark street and Lincoln Park, two three-story residences; to have stone fronts, hardwood finish, stained, plate and beveled glass, electric bells, speaking tubes, best of sanitary improvements.

Architect R. G. Pentecost: For Reverend Lewis Curtis, on Hammond avenue, South Evanston, a three-story frame residence; to have stone basement, sanitary plumbing, hardwood finish, electric bells, speaking tubes, steam heat, etc.

Architect J. C. Brompton: For Mr. Clough, on Wolcott street near Sunnyside avenue, Ravenswood, a two-story frame residence; stone basement, etc.

Architect Francis J. Norton: For George Detwiler, on East Ravenswood Park, south of Lawrence avenue, three three-story flat buildings, 62½ feet front by 63 deep; to have pressed brick and stone fronts, sanitary plumbing; cost \$18,000.

Architect Henry Ives Cobb: For syndicate, a six-story hotel, to be erected on Everett avenue, south of Fifty-fifth street. It will contain about six hundred rooms and cost \$400,000.

Architect John Hendricks: For V. Knobloch, corner of Ohio street and Lawndale avenue, a block of six two-story and basement stores and flats, 125 by 50 feet in size; to cost \$20,000; St. Louis pressed brick and stone fronts, gravel roof, sanitary plumbing, electric bells, speaking tubes, stained glass. For H. Beck, on Central Park avenue, near Garfield Park, three blocks of double three-story flats; size, 45 by 50 feet each; cost \$24,000; St. Louis pressed brick with Bedford stone trimmings, gravel roof, sanitary improvements, furnaces.

Architect R. C. Berlin: For W. H. Colvin, Jr., on Forty-seventh court near Cottage Grove avenue, nine two-story and basement residences, 162 feet frontage by 54 deep; to cost \$40,000; pressed brick and Portage brownstone fronts, gravel roof, stained, plate and beveled glass, etc.

Architects Morrison & Foster: For James Reddy, on Fifty-fifth street and Cottage Grove avenue, a three-story store and flat building, to be of frame construction and cost about \$15,000.

Architect Perley Hale: For J. D. Horton, on Fifty-fifth street and Stewart avenue, a block of six three-story flat buildings; to cost \$50,000. Ashland brownstone fronts, gravel roof, sanitary improvements, stained and plate glass, gas fixtures, etc. For M. O. Leary, on Marshallfield avenue near Polk street, a two-story flat building; to have cut stone front, stained, plate and beveled glass, gravel roof, slate tower, copper cornice, hardwood finish, etc.

Architects Treat & Foltz: For Doctor Chew, a three-story basement and attic residence; 30 by 68 feet in size; to cost \$20,000, to be erected corner of Astor and Scott streets; pressed brick, stone and terra cotta, slate roof, hardwood finish, etc.

Architect J. E. O. Pridmore: A three-story addition to Exchange building corner Van Buren street and Pacific avenue; also a seven-story building in the court. It will be of fireproof construction throughout; have marble wainscoting in all the halls, electric light, new system of sanitary plumbing, entirely new steam plant, new elevators which will be run from pressure tanks in the basement; cost \$100,000. It will be a modern first-class office building, complete in every detail, and will be known as the Traveling Men's Exchange and will be owned by a company of that name.

Architect Wm. Griesser: For Birk Bros., on Webster avenue and Ward street; a five-story stock house of fifty thousand barrels capacity; to cost \$30,000. For Crown Point Brewery, Indiana, remodeling and additions; to cost \$20,000. For Cleveland Brewing Company, Ohio, a stock house of brick, stone and iron; to cost \$10,000. For Jacob Baehr, Cleveland, Ohio, new brew house, stock house, wash house and storage house; to cost \$80,000. For Monarch Brewing Company, of Chicago, new stock house; to cost \$30,000. For C. Geiser & Son, Council Bluffs, Iowa, new brewing plant, main building to be five stories; cost \$150,000. For Malting Company, Peoria, Illinois, malt house (pneumatic) to be of three thousand bushels capacity per day. It will be three stories high, of brick, stone and iron, and cost \$40,000.

Architect J. N. Tilton: For H. Lewis, corner of Fortieth street and Cottage Grove avenue; a three-story store and flat building; 96 feet front by 60 feet deep; of pressed brick and stone; cost \$25,000.

Architect Wm. H. Drake: For Thomas Conlan and W. S. Foley, on Stony Island avenue and Sixty-ninth place; a four-story hotel; of pressed brick and stone; to cost \$40,000.

Architects W. W. Boyington & Co.: For Doctor Colburn and Doctor Taylor; two two-story basement and attic frame residences; to have stone basements, hardwood finish; cost \$15,000.

Architect D. A. Blythe: For L. P. Hammond, on Commercial street north of Lawrence avenue, Ravenswood; three two-story frame residences; to have stone basements, stained, plate and beveled glass, sanitary plumbing, furnaces; cost \$15,000.

Architect W. D. Cowles: For A. E. Kent, on Harrison street near Jefferson street; a six-story factory; 50 by 100 feet; to cost \$35,000. Pressed brick and stone front, steam heat, elevator, etc.

Cincinnati.—Reported by Lawrence Mendenhall: The season just closed, or rather closing, has been one of the most successful for many years for our city's building interests. The guardian angel of peace and harmony has exercised her powers in all directions, and the result should show to the army of malcontents and discord breeders the utter fallaciousness of strikes. But, as it has been said, "the biggest fool is a fool who does not know he is a fool."

The aggregate shown below does not show the true value of the building improvements during the past year of our city, and it is perfectly safe to add fully one-third:

	1891.	1890.
Total as per permits (est.).....	\$5,130,000	\$4,310,701

These figures also show a gratifying increase over last year's work. Our Builders' Exchange has taken a step forward in the direction of compiling building statistics of business done by its members. If it proves successful, it is intended to make the movement general, and thus our Exchange become a disseminator (as it should) of trade statistics. It has also declared itself in favor of an equitable lien law, which important subject will receive careful consideration at the convention of National Association of Builders, to be held in January in Cleveland.

Architects Nash & Plympton report: For Mrs. J. S. Cook, Cincinnati, Ohio (Myrtle avenue), a residence; materials: pressed brick, stucco, slate or tile roof, plate and stained glass, furnace, hardwood, laundry, plumbing, etc.; cost \$12,500. For Robert T. Miller, Esq., 632 Greenup street, Covington, Kentucky, a remodeling of his brick residence; to contain all modern improvements, probably costing \$5,000. For Miss E. G. Cook, Myrtle avenue, Cincinnati, a residence; materials: brick, frame, slate roof, pine finish, blinds, grates, mantels, stained glass, etc.; cost \$5,000.

Architects Des Jardin & Hayward have drawn plans for the Italian consul, Dr. A. Ravogli, Cincinnati; materials: pressed brick, stone foundations and trim, slate roof, hardwood, stained glass, mantels, furnaces, laundry fixtures, etc.; cost \$10,000. Also for Mrs. E. L. Rice (care architect), a residence; materials: brick, stone trim and foundations, slate roof, pine finish, mantels, gas, plumbing, stained glass, etc.; cost \$6,000.

Architects Saml. Hannaford & Sons report for H. Huhlman & Son a spice mill; materials: pressed brick, fireproofing, tin roof, elevator, steam heat,

machinery, plumbing and gas. Also for Mr. Geo. Hummel, stone contractor, Elder and Logan streets, Cincinnati; materials: stone, slate roof, hardwood finish, gas, plumbing, stained glass, laundry, wood mantels, etc.

Architect J. H. Kuckertz has drawn plans for a residence for George Kollmann, Norwood, Ohio; materials: brick, pine finish, tin roof, plumbing, gas, blinds, etc.; cost \$7,000.

Architect W. W. Franklin has prepared plans for Mr. J. C. Noyes, care of J. A. Fay & Co., Cincinnati; materials: frame, stone foundations, slate roof, gas, plumbing, stained glass, grates, mantels, etc.; cost \$10,000 for the two houses. Also for Dr. J. C. Thompson (care architect), a residence; materials: frame, slate roof, blinds, grates, mantels, stained glass, gas, plumbing, etc.; cost \$3,500.

Architects Crapsey & Brown have drawn plans for a church for the Presbyterians at Winchester, Kentucky; materials: stone, brick, slate roof, hardwood, frescoing, pews, stained glass, furnace, plumbing, etc.; cost \$25,000.

Architect J. W. McLaughlin has prepared plans for a church for the Baptist congregation at Cumminsville, Cincinnati; materials: brick, stone foundation, slate roof, gas, plumbing, plate and stained glass, grates, furnace, etc.; cost \$30,000.

Architect W. C. Lawrence reports for J. W. Jeaynes, Cincinnati, two residences; materials: pressed brick, stone trim, slate roof, gas, stained glass, etc.; cost \$6,000.

Cleveland, Ohio.—Architect John Eisenmann: For the Bradley estate, a five-story store and power house, size 47 by 195 feet, brick; cost \$22,000; contractors Calleser & Moore.

Architects Coburn & Barnum: For the Western Reserve University, a three-story brick dormitory, size 44 by 45 feet; cost \$20,000; also for John F. Zabel, a three-story brick store and tenement building, size 58 by 68 feet; cost \$9,000.

Architect George O. Garnsey, of Chicago: For Charles H. Bulkley, alterations and additions to theatre building, brick and stone, size 40 by 25 feet; cost \$25,000.

Architects' names not reported for the following: For L. M. Southern, two two-story frame dwellings, size 26 by 60 feet; cost \$12,000; and also a two-story residence, frame, stone foundations, size 26 by 54 feet; cost \$5,000. For the Brakes Wire & Nail Works, a one-story brick workshop, size 60 by 120 feet; cost \$16,200.

Denver, Colo.—Architects Varian & Sterner: For J. C. Seller, a three-story business block, stone and brick, size 50 by 125 feet; cost \$40,000.

Detroit, Mich.—Architect G. W. Lloyd: For William Wright, a four-story brick manufacturing building, on Fort street near Eighth; size 50 by 97 feet; cost \$15,000.

Architect Edward C. Van Leyen: For George T. Atery, a three-story hotel and Casino building; size 50 by 70 feet; to be erected on corner of East boulevard and river bank; to cost \$8,000.

Architects John Scott & Co.: For Pingree and Smith, a seven-story shoe factory, on Jefferson avenue near Wayne street; size 50 by 200 feet; cost \$85,000.

Architects Nelson & Oldfield: For A. B. Healey, a two-story store and flat building, brick; to cost \$6,000.

Architect T. W. Highland: For Colonel Fred E. Farnsworth, a two-story brick residence, on John and Frederick streets; to cost \$7,000. Also for Charles L. Farnsworth, a two-story residence in Highland Park; pressed brick, slate roof; cost \$7,000. And for Jacob Hammer, a two-story frame residence, on Hellen and Farnsworth avenues; cost \$5,000.

Architect J. G. Maclean: For Fred H. Mann, Windsor, Ontario, a two-story brick and frame residence, on corner of Park and Victoria avenues; to cost \$5,000.

2695 New buildings	\$5,015,900
701 Additions	641,800
Fuel, sheds, etc.....	9,525
Total of....	\$5,667,225

\$292,745 over 1890.

Milwaukee, Wis.—Of the eleven designs submitted for the new City Hall the committee have thrown out all except those of H. C. Koch & Co., Henry Ives Cobb, W. A. Holbrook, Rau & Kirch and Schnetzky & Liebert. These five will only be considered and it is expected a final decision will be made this week. The building is to be eight stories, and not to cost over \$600,000.

Architects Ferry & Clas have prepared plans for Schultz Bros., for a three-story furniture factory, size 50 by 120 feet, brick, stone and terra cotta trimmings; cost \$40,000.

The building gains during the past year have been something remarkable, being the greatest year we have ever known in the history of our city.

Total number of permits issued during the past year 1,947, at a value of \$10,000,000.

Minneapolis, Minn.—The total number of building permits issued last year was 3,026, aggregating \$4,704,575. The plumbing permits amounted to \$241,017, and the electric permits to \$28,500. The suburban building amounted to \$500,000.

Pittsburgh, Pa.—Architects Longfellow, Alden & Harlow are the successful competitors in the Carnegie Library competition, their plans having been selected from over a hundred designs submitted. The building, which is to be in the pure Renaissance style, will be chiefly granite and the work commenced as soon as possible; cost \$700,000.

Architect J. Anglin: For W. F. Aull, a two-story residence; size 45 by 45 feet; brick with slate roof; cost \$9,500.

Architect George S. Orth: For Mrs. C. Vandevort, a three-story residence; size 40 by 45 feet; cost \$9,500.

Architects Scott & Peebles: For the twenty-second ward, a one-story school-house, on Linden avenue; size 70 by 80 feet; brick and stone; cost \$12,900.

The Building Committee of Christ M. E. Church offer rewards for the new church to be erected in the east end. The successful architect is to receive his commission, and the second and third choice will get \$200 each. The church, chapel and parsonage will be quite separate. The cost of the three buildings to be about \$200,000.

St. Louis, Mo.—Architect F. W. Folk: For Mrs. Hoskins, a two-and-one-half-story residence; size 28 by 35 feet; brick and stone; cost \$8,000.

Architects Shepley, Rutan & Coolidge: For H. Hitchcock, a two-story residence; size 46 by 50 feet; brick, stone foundation, and slate roof; cost \$25,000. Also for the Tiffany Real Estate Company, a brick warehouse; size 122 by 130 feet; cost \$75,000.

Architect J. H. Randall: For H. C. Hyman, a two-story residence; size 27 by 52 feet; pressed brick, stone foundation; cost \$6,000.

Architects W. S. Balson & Son have prepared plans for R. S. Martin, for a two-and-one-half-story dwelling; size 40 by 50 feet; cost \$7,000.

Architect A. M. Baker: For P. St. John, a two-story apartment building; size 27 by 50 feet; brick and stone; cost \$5,000.

M. Gordon will build a two-story residence, brick; size 30 by 43 feet; cost \$7,000.

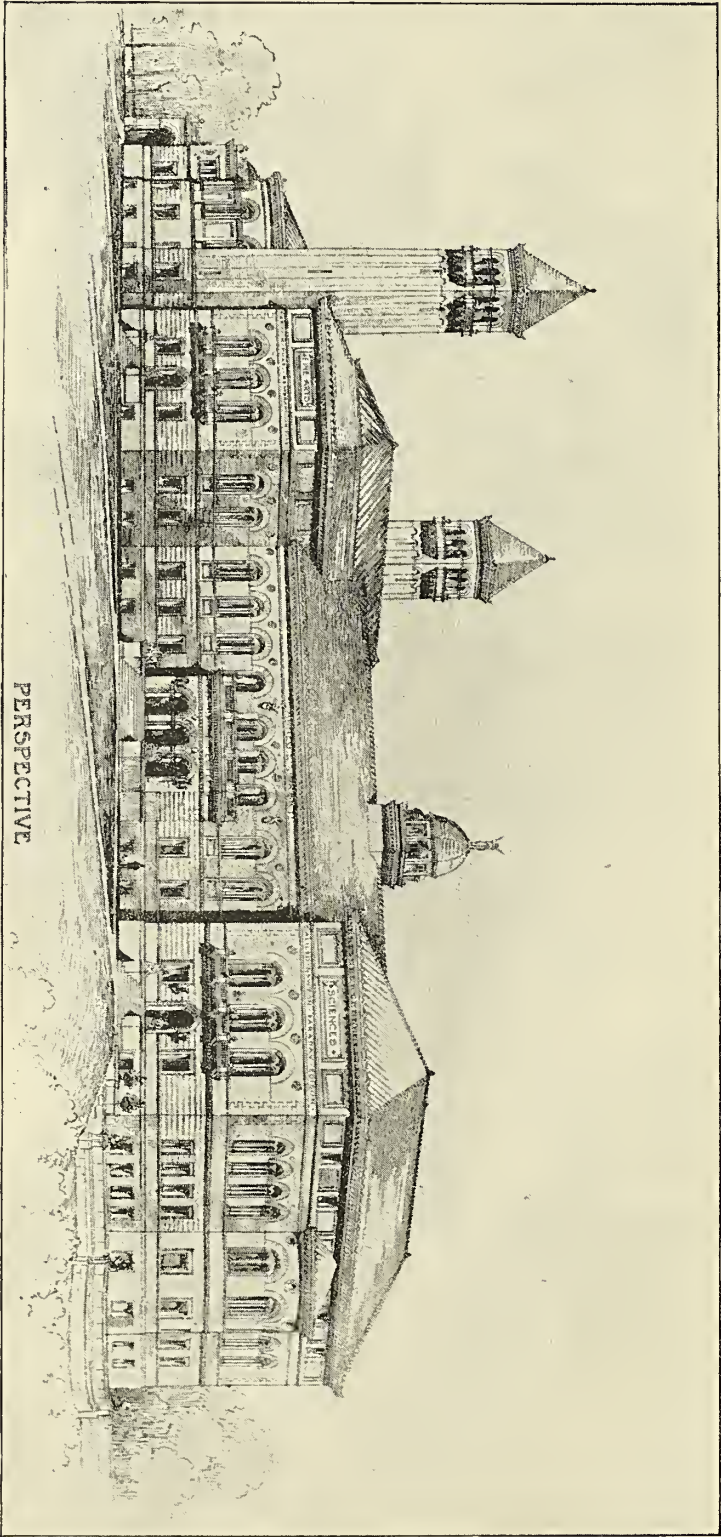
Architect T. J. Quin: For T. W. Peters, a three-story residence, brick; cost \$10,000.

J. A. Scudder will build a three-story residence, brick and stone; cost \$11,000. Contractors, Clark & Witney.

St. Paul, Minn.—Architects Hermann Krititz & Co. have just completed plans for a three-story brick and stone apartment house, to be erected at a cost of \$65,000, on Summit avenue between Minnesota and Cedar streets; it will have a high basement, and will be supplied with steam heat, elevators and all modern appliances. The same architects are also drawing plans for a tannery, three stories in height, which will cost about \$30,000.

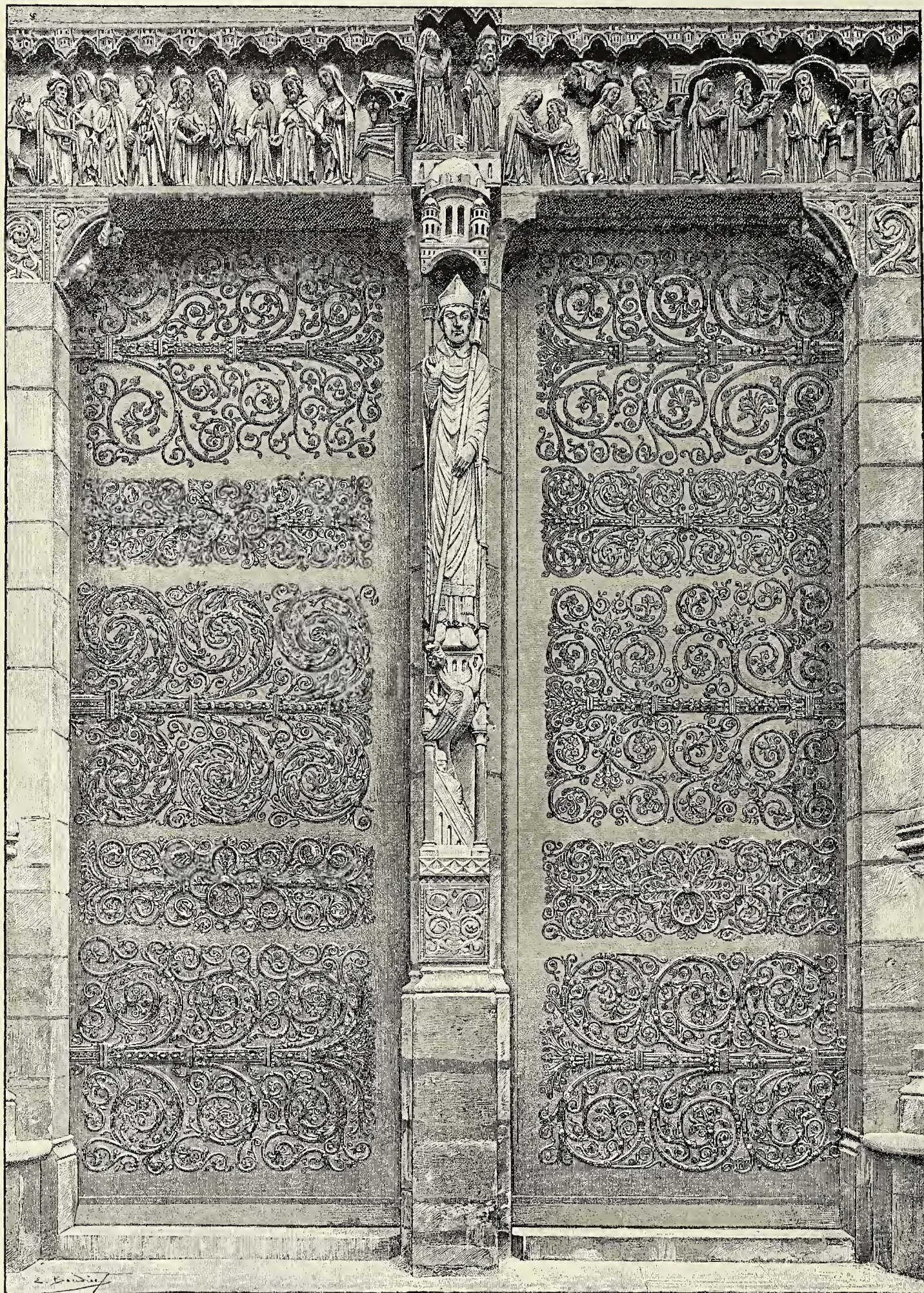
Architects Reed & Stem are drawing plans for the new St. Paul auditorium; the building will have a frontage of 300 feet on Seventh street and 150 feet each on St. Peter and Wabasha streets; part of the present market house will be utilized, making the cost not over \$120,000; the hall will have a seating capacity for 12,000, and is designed after that at Bayreuth, and the best features of the Chicago auditorium have been adopted.

The building permits issued in St. Paul during the past year numbered 2,408, and amounted to \$3,184,410. There was also about \$500,000 expended in the suburbs in residences and manufacturing plants.



ACCEPTED COMPETITIVE DESIGN FOR THE CARNEGIE LIBRARY BUILDING,
PITTSBURGH, PA.

LONGFELLOW, ALDEN & HARLOW, ARCHITECTS



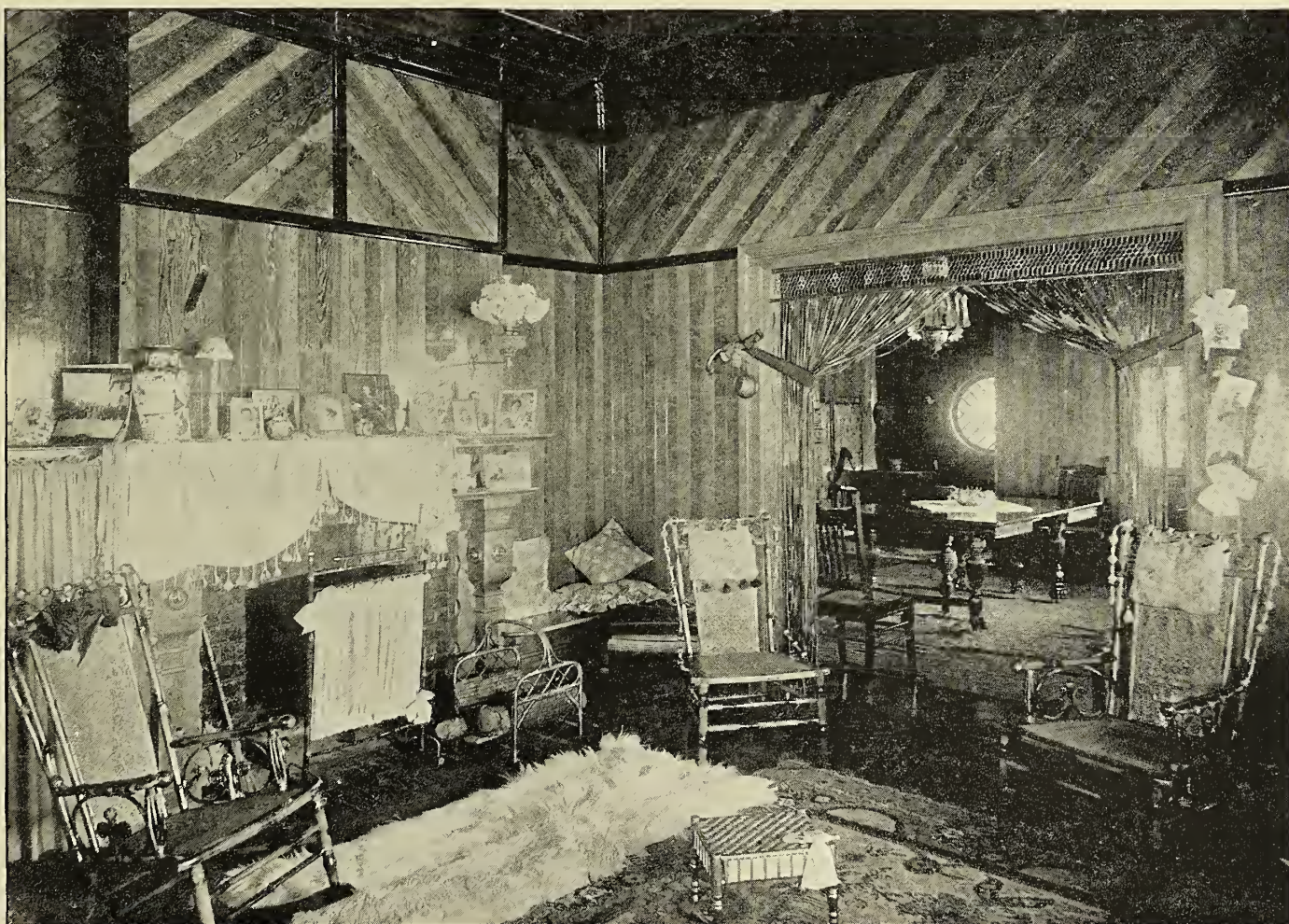
DOOR OF ST. ANNE, NOTRE DAME, PARIS.

IN ILLUSTRATION OF ARTICLE "ARCHITECTURE AND THE ALLIED ARTS" IN THIS NUMBER.



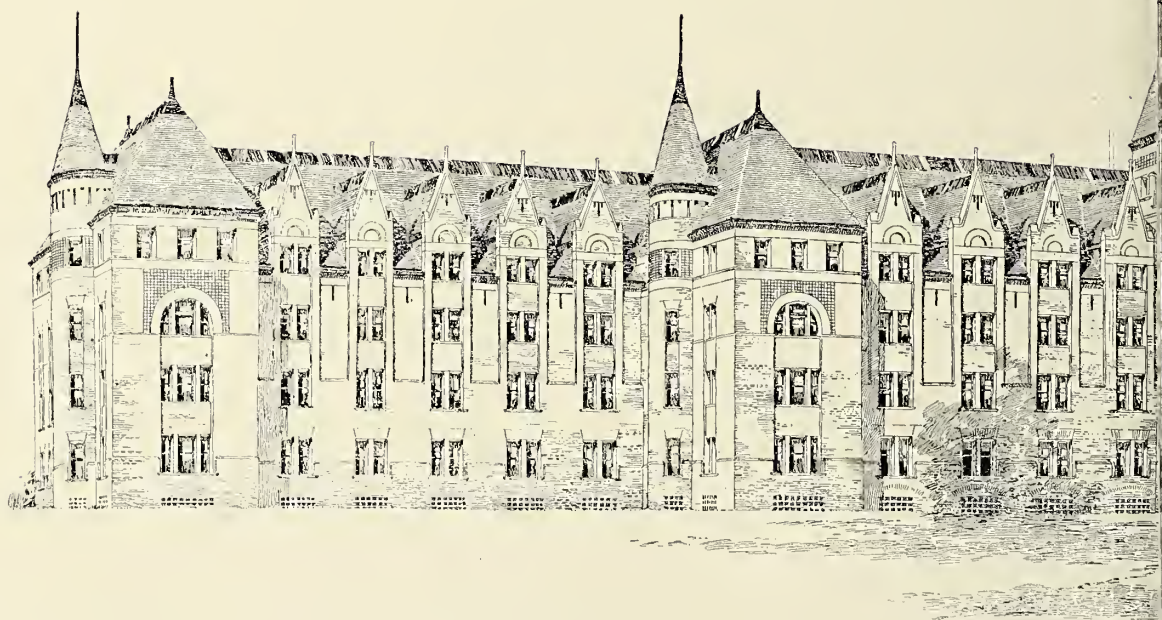
CHOIR SCREEN, CHARTRES CATHEDRAL.

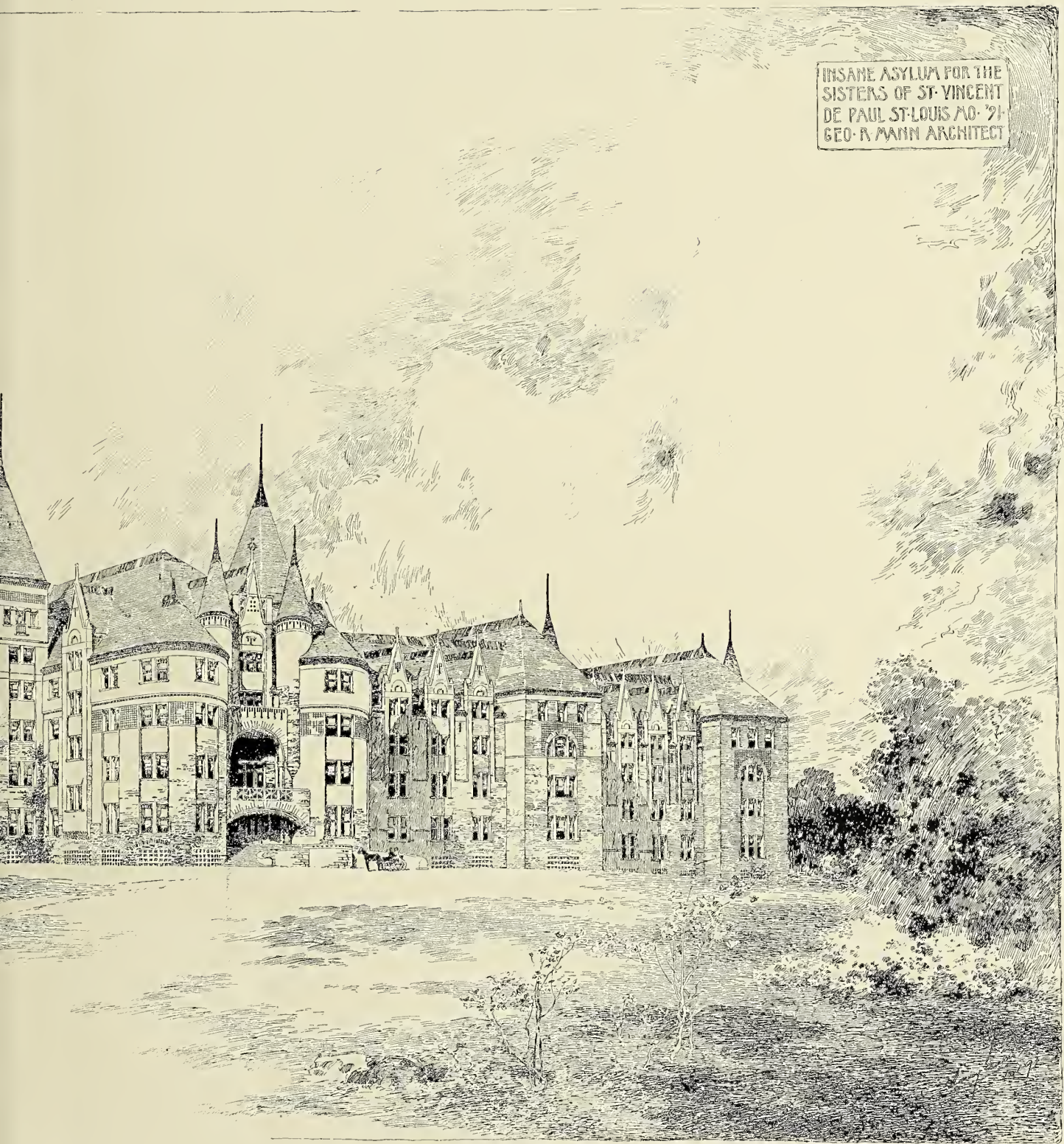
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VIEWS OF SUMMER RESIDENCE OF COL. B. W. WRENN, FRONTENAC, NEW YORK,
ON THE ST. LAWRENCE RIVER.

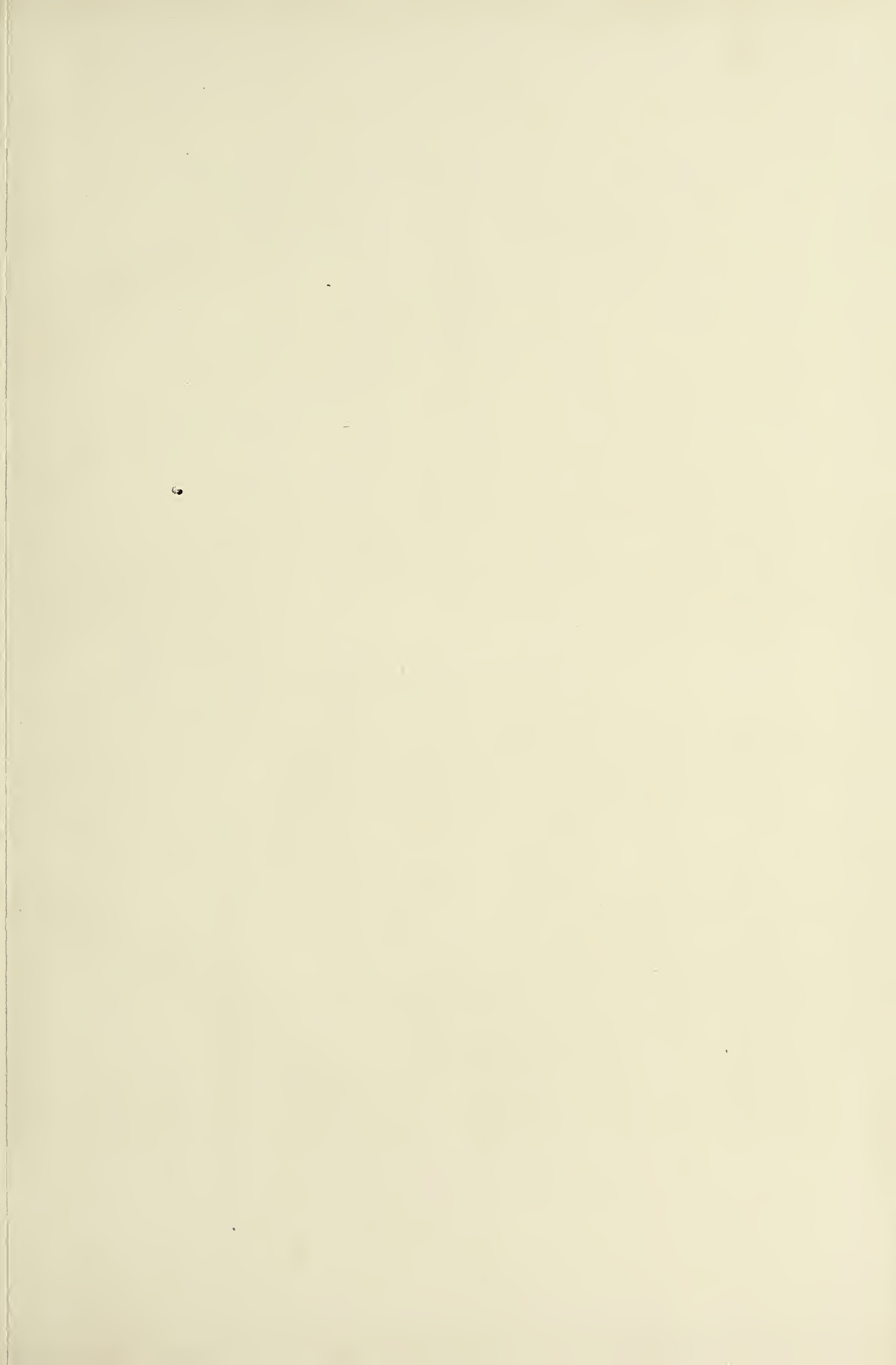
F. H. TAYLOR, ARTIST AND ARCHITECT



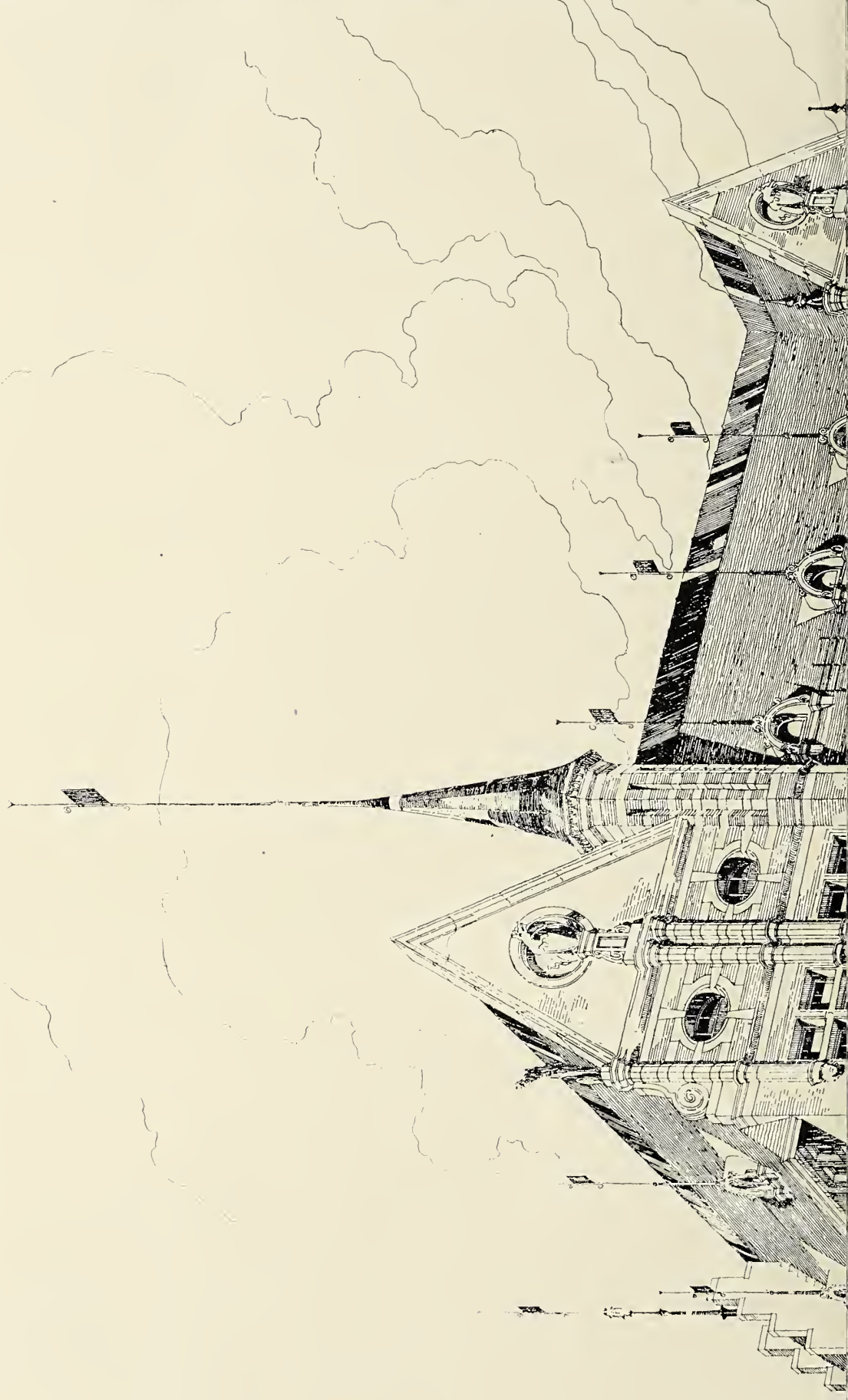


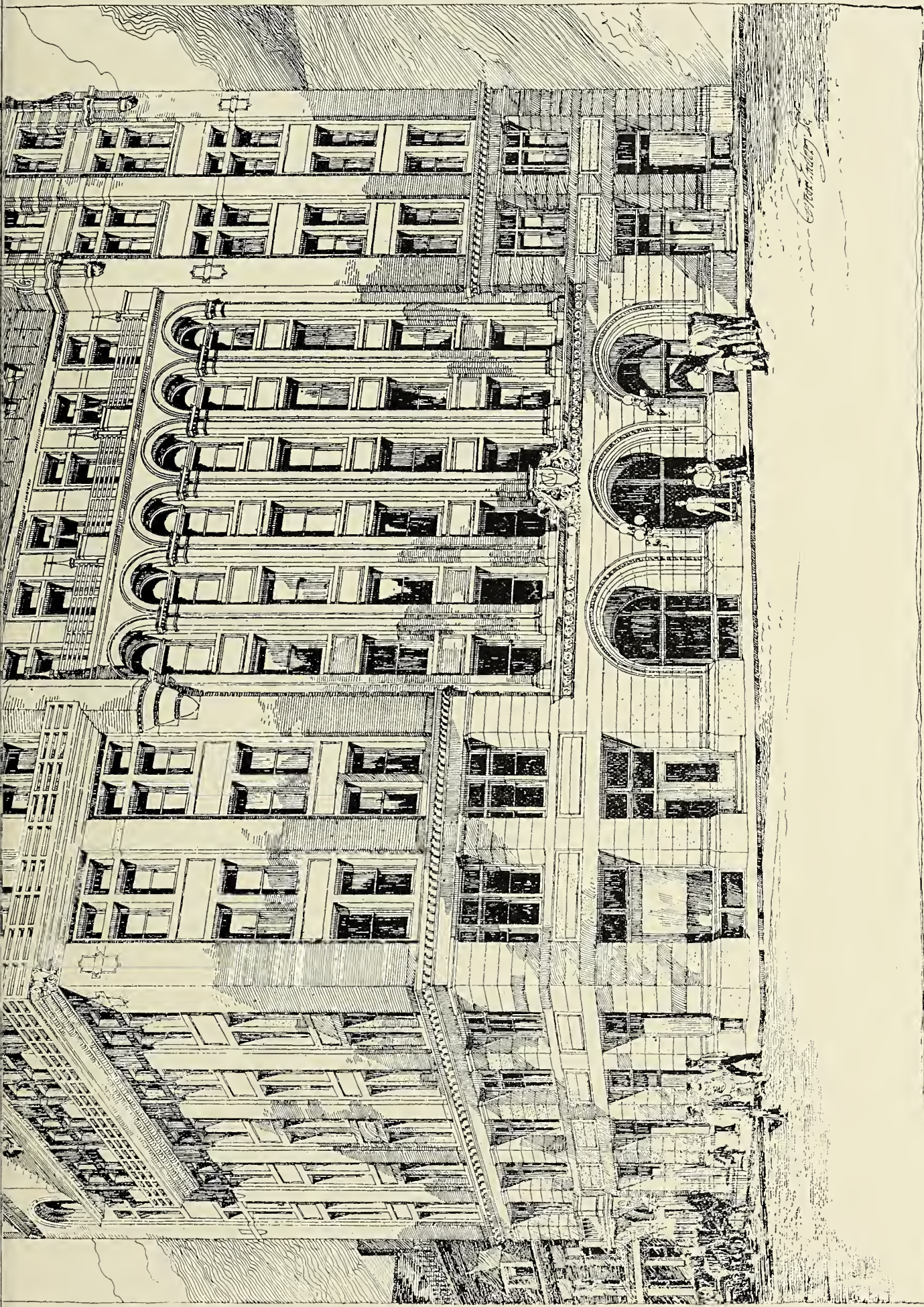


INSANE ASYLUM FOR THE
SISTERS OF ST. VINCENT
DE PAUL, ST. LOUIS, MO. '71
GEO. A. MANN ARCHT.



THE MERCANTILE CLUB BUILDING
ST. LOUIS MO. ISAACS TAYLOR ARCHT





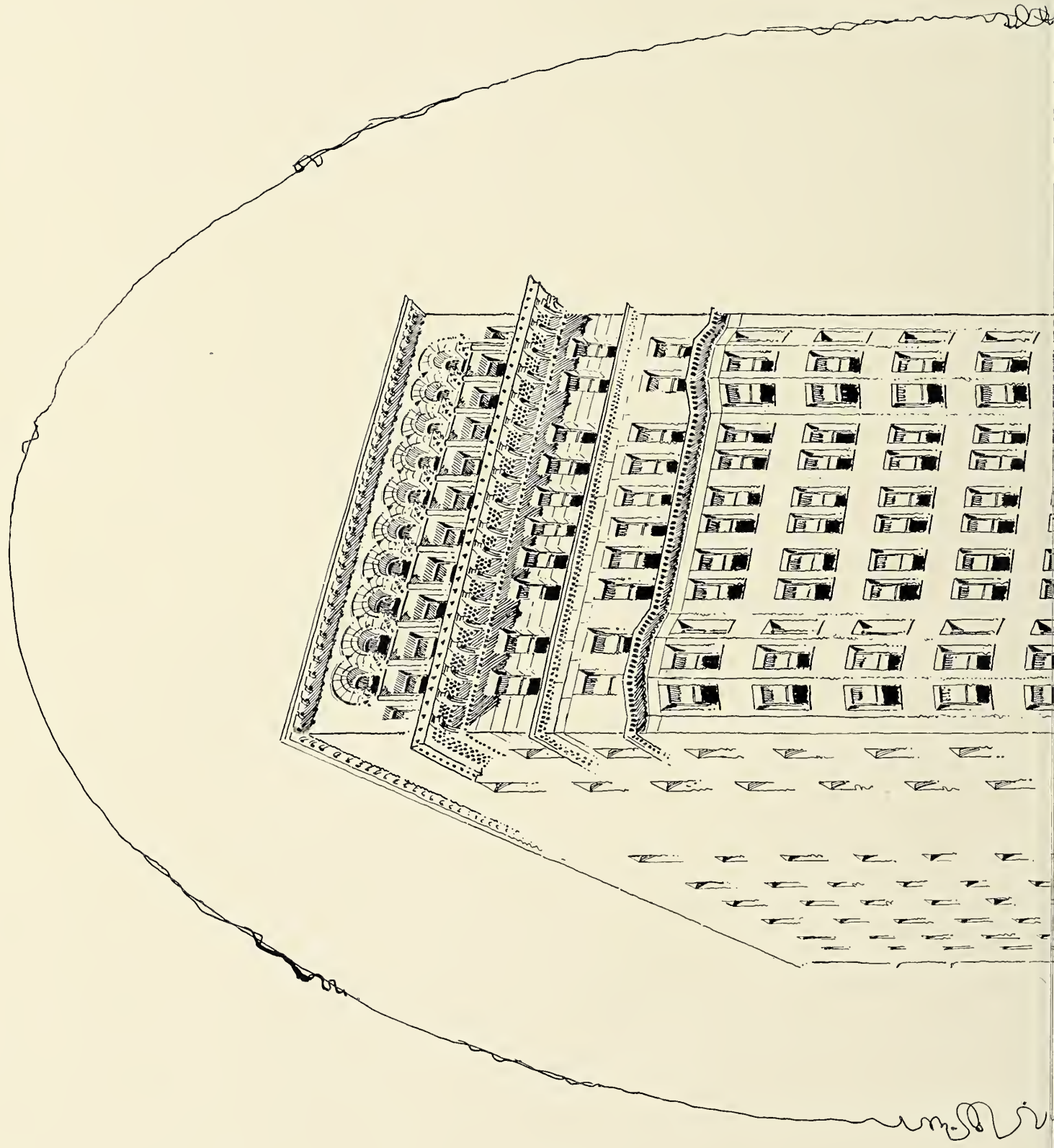
FINAL DESIGN FOR THE MERCANTILE CLUB BUILDING, ST. LOUIS, MISSOURI.

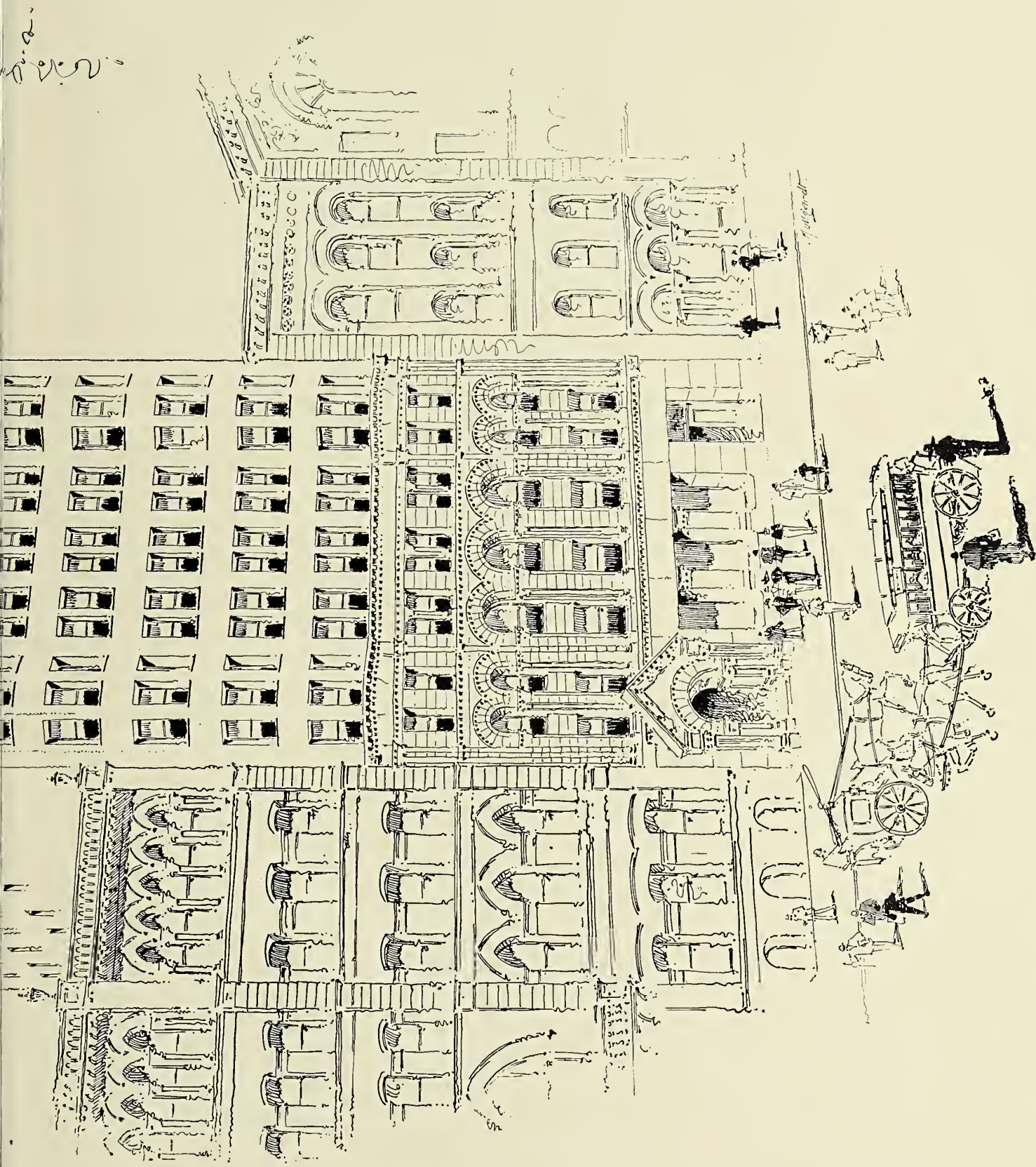
ISAAC S. TAYLOR, ARCHITECT.



FINAL DESIGN FOR THE MERCANTILE CLUB BUILDING, ST. LOUIS, MISSOURI.

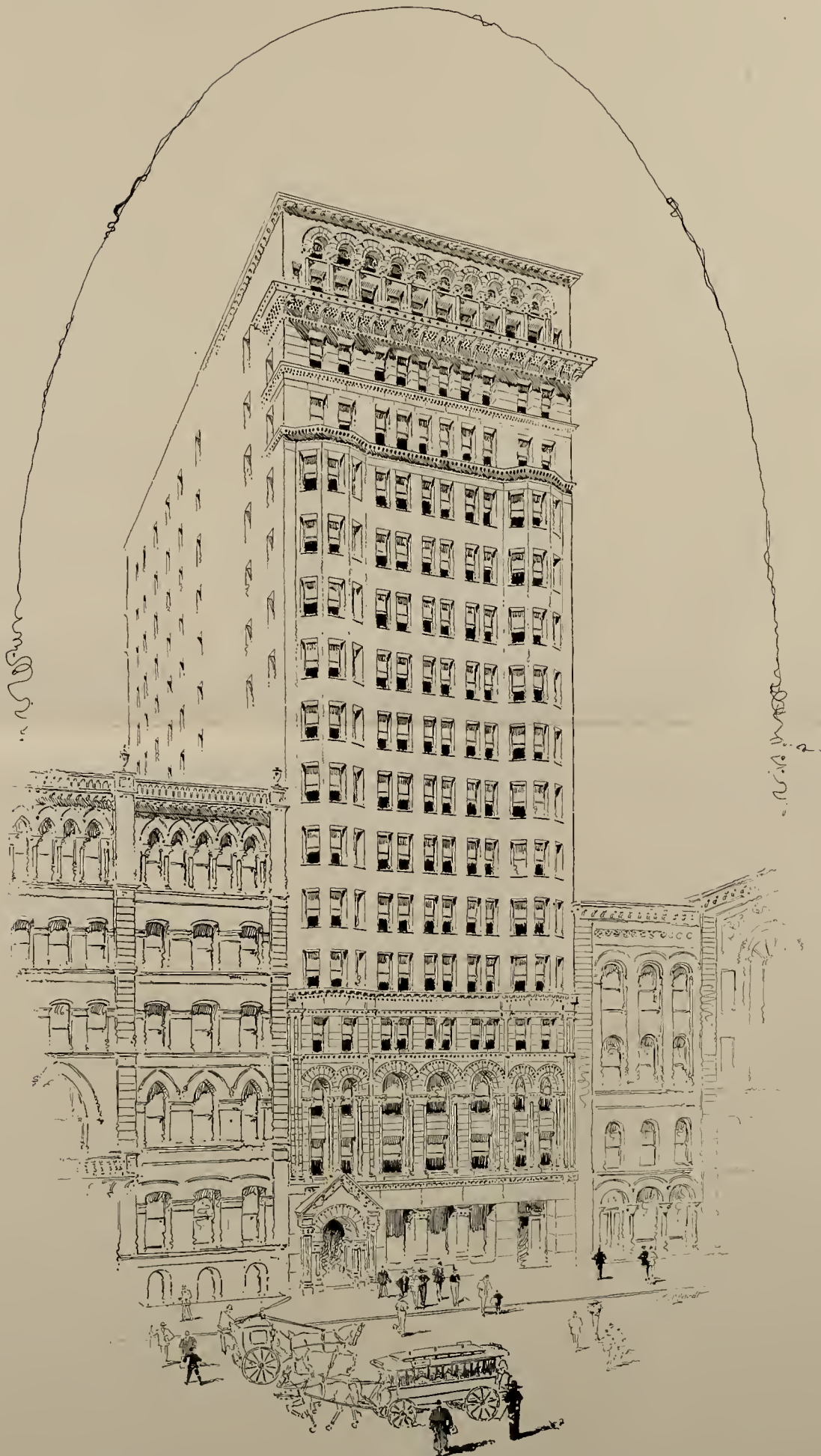
ISAAC S. TAYLOR, ARCHITECT.





OFFICE BUILDING FOR THE CHICAGO TITLE AND TRUST COMPANY, CHICAGO.

HENRY IVES COBB, ARCHITECT.



OFFICE BUILDING FOR THE CHICAGO TITLE AND TRUST COMPANY, CHICAGO.

HENRY IVES COBB, ARCHITECT.



SMITHSONIAN INSTITUTION LIBRARIES



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